4.3 LAND USE AND PLANNING

This section discusses how counties and cities in the State of California guide the location, type, and quality of development though adoption of general plans and zoning regulations. Any other instrument that a local jurisdiction has in place to regulate how and where development may occur, including ordinances and related planning documents that regulate installation and management of OWTS, must be consistent with its adopted general plan. For this land use analysis, a few local municipalities have been selected in Northern, Central, and Southern California to represent a range of conditions in the state where installation and replacement of OWTS occurs. Overviews of the respective adopted general plans have been included to convey the essence of the local planning environments for these selected municipalities, which leads to assumptions about how the proposed statewide regulations for OWTS may or may not affect decisions at the local level regarding development of land with on-site disposal of sewage.

As discussed in greater detail later in this section, the primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (State Water Board) and the nine regional water quality control boards (regional water boards). Discharges of waste that may affect water quality are regulated through implementation of various plans, policies, and specific control measures, which may be set forth by the State Water Board, the regional water boards, and/or by other agencies with water quality or related authority. For example, pursuant to Memoranda of Understanding (MOUs) with the regional water boards, County Environmental Health Departments issue permits to install and operate individual waste disposal systems in lieu of direct regulation by the State. This shared authority has been integral to a wide range of plans and programs that are designed to protect the waters of the State. This section includes a companion analysis of how the proposed statewide regulations for OWTS may or may not affect the process that local jurisdictions generally follow to regulate the installation and management of OWTS.

4.3.1 ENVIRONMENTAL SETTING

APPLICABILITY OF STATE LAWS TO LOCAL PLANNING PROCESSES

Local jurisdictions receive the authority to exercise their respective land use planning functions through State of California planning laws. Of those laws that provide the basis for local jurisdictions to govern development within communities, the general plan (Government Code Section 65300 et seq.) and state zoning law (Government Code Section 65800 et seq.) are especially comprehensive. The general plan and zoning law provide the basic context for an understanding of local planning processes related to how and where development occurs.

General Plan

Purposes and Contents

As provided in State law, the general plan is a comprehensive, long-term, and general document that describes plans for the physical development of the City or County and of any land outside its boundaries that, in the City's or County's judgment, bears relation to its planning (Government Code Section 65300). The general plan is required to include seven mandatory elements—land use, circulation, housing, conservation, open space, noise, and safety—and any optional element(s) that the city or county chooses to adopt. In addressing these topics, the general plan shall consist of a "statement of development policies" and must include diagrams and text setting forth "objectives, principles, standards, and plan proposals." (Government Code Section 65302) The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning areas, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

In summary, the preparation, adoption, and implementation of a general plan serve to:

- identify the community's land use, circulation, housing, environmental, economic, and social goals and policies as they relate to land use and development;
- provide a basis for local government decision making, including decisions on development approvals and exactions;
- provide citizens with opportunities to participate in the planning and decision-making processes of their community; and
- inform citizens, developers, decision makers, and other cities and counties of the ground rules that guide development within the community (Curtin and Talbert 2006).

Thus, the general plan provides a two-way connection between community values, visions, and objectives—and the planned physical development within a community (e.g., construction of subdivisions and public works projects).

Background

Before 1971, the general plan was usually considered an advisory document (Curtin and Talbert 2006). The general plan consistency doctrine was imposed in California in 1971 by the state legislature, which directed that a city's or county's zoning and subdivision approvals must be consistent with the adopted general plan for a particular municipality. The initial legislation and subsequent amendments require local municipalities to "engage in the discipline of setting forth their development policies, objectives, and standards in a general plan composed of various elements of land use." (58 Ops.Cal.Atty.Gen. 21, 23 [1975]). As a result of these legislative changes, the general plan became the basic land use charter that embodies fundamental land use decisions and governs the direction of future land use in the city's jurisdiction (*City of Santa Ana v. City of Garden Grove* [1979] 100 Cal.App.3d 521, 532; *see also DeVita*, 9 Cal. 4th at 763). Today, the general plan requirements are stated in Government Code Section 65300 et seq., which establishes the obligation of cities and counties to adopt and implement general plans.

General Plan—The Constitution

In 1990, the California Supreme Court held that the general plan was the "constitution for all future developments." (Curtin and Talbert 2006) The Court confirmed the general plan as the single most important planning document (*Lesher Communications, Inc. v. City of Walnut Creek* [1990] 52 Cal.3d 531, 540; *Citizens of Goleta Valley v. Board of Supervisors* [1990] 52 Cal.3d 553, 570–71_. In *Lesher*, the California Supreme Court struck down a growth control initiative that conflicted with the City of Walnut Creek's general plan. In *Goleta Valley*, the Court concurred with earlier appellate court statements that the general plan is the "'constitution for all future developments' within the city or county" to which any local decision affecting land use and development must conform. Under *Lesher*, any subordinate land use action, such as a zoning ordinance, tentative map, or development agreement, that is not consistent with a city's or county's current and legally adequate general plan is "invalid at the time it is passed." (*Lesher* 52 Cal.3d at 544.)

Consistency

The *State of California General Plan Guidelines 2003* includes an extensive discussion of consistency in implementation of general plans (Governor's Office of Planning and Research 2003). The discussion includes the following text:

> *The general plan is largely implemented through zoning and subdivision decisions. In 1971, the state legislature made consistency with the general plan a determinative factor for subdivision*

approvals. Since then, lawmakers have continued to add consistency requirements to California's planning and land use laws. Other statutes, while not mandating consistency, require findings or a report on whether various local actions conform to the general plan.

A general plan must be integrated and internally consistent, both among the elements and within each element (Government Code Section 65300.5) (Curtin and Talbert 2006). Furthermore, since the general plan is the constitution for all future development, any decision of the city affecting land use and development must be consistent with the general plan. (*Citizens of Goleta Valley v. Board of Supervisors* [1990] 52 Cal.3d 553, 570). A general rule for consistency determinations has been cited by the courts: "An action, program or project is consistent with the general plan if, considering all its aspects, it will further the objectives and policies of the general plan and not obstruct their attainment." (Governor's Office of Planning and Research 2003).

The city or county is responsible for determining whether an activity is consistent with the general plan. A city council's finding of a project's consistency with the general plan would be reversed by a court if, "based on the evidence before [the] city council, a reasonable person could not have reached the same conclusion." (*No Oil, Inc. v. City of Los Angeles* [1987] 196 Cal.App.3d at 243) (upholding city's specific finding of consistency between general plan and ordinance establishing oil drilling zones) (Curtin and Talbert 2006).

Adoption and Amendment

When adopting or amending a general plan, a city or county must follow the procedures set forth in Government Code Section 65350 et seq. The planning commission for the city or county must hold a public hearing on the adoption or amendment and make a written recommendation to the city council (Government Code Section 65353[a] and 65354). The commission's recommendation for approval must be made by an affirmative vote of not less than a majority of its total membership (Government Code Section 65354) (Curtin and Talbert 2006).

A general plan is adopted or amended by resolution (Government Code Section 65356). Because the nature of the resolution is legislative, it does not take effect until the 30-day period for referendum has elapsed. (*Midway Orchards v. County of Butte* [1990] 220 Cal.App.3d 765, 780). Prior to legislative approval, a proposal to adopt or substantially amend a general plan must be referred to various agencies that could be identified as having a stake in such a decision (Government Code Section 65352). Generally, any of these agencies have 45 days to comment. Although the provision uses the word "shall," this section is directory, and failure to comply does not invalidate the adoption or amendment of the plan (Government Code Section 65352[c][1]). Cities and counties must refer a "proposed action" (general plan, specific plan, or zoning) to one another pursuant to Government Code Section 65919 et seq. Thus, before acting on the proposed action, a county must refer it to the affected cities for comment and vice-versa (Government Code Section 65919.3) (Curtin and Talbert 2006).

Copies of the general plan or amendments shall be made available for inspection by the public within 1 working day following adoption. Within 2 working days after a request, copies shall be furnished to those so requesting (Government Code Section 65357[b]).

A change to a portion of a general plan requires a general plan amendment. As provided in law, "If it deems it to be in the public interest, the legislative body [city council or county board of supervisors] may amend all or part of an adopted general plan. An amendment to the general plan shall be initiated in the manner specified by the legislative body." (Government Code Section 65358[a]) It is generally accepted that a general plan amendment would be required for any substantial change to the general plan text or an accompanying map.

(Also, see the discussion below regarding consistency of the zoning ordinance with the general plan and any applicable specific plan.)

Zoning Regulations

The State Zoning Law (Government Code Section 65800 et seq.) provides for the "adoption and administration of zoning laws, ordinances, rules, and regulations by counties and cities, as well as to implement such general plan as may be in effect in any such county or city." (Curtin and Talbert 2006) Zoning is basically the division of a city or county into districts and the application of different regulations in each district. Zoning regulations are generally divided into two classes: (1) those that regulate the height or bulk of buildings within certain designated districts—in other words, those regulations that have to do with structural and architectural design of the buildings; and (2) those that prescribe the use to which buildings within certain designated districts may be put. The California state legislature has given cities maximum control over zoning matters while ensuring uniformity of, and public access to, zoning and planning hearings.

Zoning ordinances must be consistent with the general plan and any applicable specific plan (Government Code Section 65860[a]). (Specific plans are used to systematically implement the applicable general plan for all or part of the area covered by the general plan [Government Code Section 65450 et seq.]) When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code Section 65860[c]). As described above, the courts have affirmed that any subordinate land use action—including a zoning ordinance—that is not consistent with a city's or county's current and legally adequate general plan is "invalid at the time it is passed." *Lesher* 52 Cal.3d at 544.

Every city in California has an existing zoning ordinance (Curtin and Talbert 2006). The effect of that zoning ordinance on real property can be changed by the city council by adopting an amending ordinance. Substantive amendments to zoning ordinances include two basic types: (1) reclassification of the zoning applicable to a specific property, designating a change from one district to another district, commonly called "rezoning;" and (2) changes in the permitted uses or regulations on property within particular zones or citywide, commonly called "text amendments."

If the city council approves, or approves as modified, a proposed zoning amendment, the council must introduce it at a regular or adjourned regular meeting and then adopt the amendment by ordinance at a subsequent meeting (Government Code Sections 36934 and 65850). County boards of supervisors are authorized to adopt a rezoning ordinance with only one reading after a noticed public hearing (Government Code Section 25131).

OVERVIEW OF LOCAL PLANNING PROCESSES FOR SELECTED LOCAL MUNICIPALITIES

Discretionary actions by local municipalities implementing residential or other types of development projects throughout the state occur under the umbrella of State planning law and in accordance with the respective general plans for each city or county. The types of projects implemented at the local level vary widely depending on many factors. A list of some of the parameters that may influence how development occurs at the local level includes the following:

- relative level of local development pressure and the views of the community toward new development (e.g., residential, commercial, institutional, and/or industrial);
- existence of sensitive habitats and other natural resources, which may constrain the extent and intensity of development in an area;
- relative cost of development; and
- ability of public utilities and local service providers to serve new development.

This section presents summaries for selected local municipalities in the State, including overviews of the respective general plans and descriptions of applicable policies that directly or indirectly address siting and

management of OWTS in these representative planning areas. The selected municipalities include Santa Cruz County, Riverside County, Sonoma County, Inyo County, and the Town of Paradise. These jurisdictions were selected to provide a representative range of geophysical conditions where on-site waste disposal systems are managed. Existing and planned residential development projects within the planning areas for these municipalities may include installation and use of OWTS, which are generally regulated locally through the county's or city's code requirements and other guidance provided by the applicable general plan, and in accordance with the requirements of the regional water board with jurisdiction for a particular region. See the section below, "Protection of Water Quality in California," for further explanation.

This section also provides descriptions of any applicable habitat conservation plans or natural community conservation plans within the selected municipalities. Any county or other municipality in the State that has proposed or implemented a multiple-species habitat conservation plan (MSHCP) or natural community conservation plan (NCCP) is, in essence, streamlining the process to approve and implement development plans while preserving defined habitat areas for the benefit of plant and animal species. These discussions are particularly relevant to the impact discussions in Section 4.3.2, "Analysis of Environmental Impacts," which include an analysis of potential impacts of the proposed project on any adopted habitat conservation plan or NCCP.

Santa Cruz County

Santa Cruz County is the second smallest county in California, containing a total of 282,240 acres (441 square miles). The county is located between the San Francisco Bay Area and the Monterey Peninsula. According to DOF data, total population in the county in 2000 was estimated at 256,874 people (DOF 2004). Unincorporated areas in the County have consistently represented over half of all the population in the County (Santa Cruz County 1994). Several rural communities are located in the county interior, along the San Lorenzo River and within Scotts Valley. The eastern edge of the county is generally bounded by the Santa Cruz Mountains and the San Andreas Rift Zone. Several State parks are located within the county, and extensive areas throughout the county are hilly and remote. The Cities of Santa Cruz, Capitola, and Watsonville are located at the south end of the county, which is generally bounded by the Pajaro Valley. State Route (SR) 1 curves along the Pacific coastline, and SR 17 connects areas across the county between San Jose and the City of Santa Cruz.

1994 General Plan/Local Coastal Program

The Santa Cruz County 1994 General Plan/Local Coastal Program (LCP) Land Use Plan, which was adopted by the County on May 24, 1994, is the comprehensive plan for growth and development in the unincorporated areas of the County (Santa Cruz County 1994). LCPs are basic planning tools used by local governments to guide development in the coastal zone, in partnership with the California Coastal Commission. LCPs specify the appropriate location, type, and scale of new or altered uses of land and water. Each LCP includes a land use plan and measures to implement the plan (e.g., zoning ordinances). Prepared by local governing bodies, these programs govern decisions that determine the short- and long-term conservation and use of coastal resources.

During the 1960s and 1970s, Santa Cruz County experienced rapid growth in both population and development. In response to growth pressures, the County implemented a series of measures intended to provide high quality development, and ensure adequate public services and protection for the County's natural and agricultural resources. These measures include General Plan and LCP Land Use Plan policies, a voter mandated growth management system, and programs intended to address specific land use, housing, and resource conservation concerns.

The body of land use policies and programs contained in the General Plan and LCP Land Use Plan includes the General Plan and LCP Land Use Plan policy text, various maps and diagrams, and the ordinances contained in the Santa Cruz County Code. The County has utilized these land use policies and regulations to define when and where urban development should and should not occur—thereby regulating the quality of development,

controlling the pace of development consistent with the availability of public services, and protecting the natural resources that enhance the County's environment.

The following sections identify General Plan policies from three elements of the General Plan—Conservation and Open Space; Public Safety and Noise; and Parks, Recreation and Public Facilities—providing some context for understanding the County's approach to development. Several policies are listed that identify land use constraints intended to protect surface and groundwater quality, including those that specifically address development density with respect to the County's sewage disposal ordinance (further described below under, "Local Regulatory Guidance Processes For Siting and Management of OWTS"). Selected policies related to the density of development in the County, as well as other applicable policies, are listed below.

Conservation and Open Space Element

The Conservation and Open Space Element is focused on natural and cultural resources protection, open space protection, and resource utilization. Several policies address issues related to water supply, wastewater treatment and disposal, and drainage, and a few of those policies address minimum parcel sizes allowable in identified "water quality constraint areas," in accordance with provisions contained in Chapter 7.38, "Sewage Disposal," from the Santa Cruz County Code, which is available online at http://ordlink.com/codes/santacruzco/index.htm.

- **5.5.4 (LCP) Minimum Size for Existing Parcels in Water Quality Constraint Areas.** Require 2½ net acre minimum parcel sizes for development of existing lots of record within Water Quality Constraint Areas. Allow exceptions to the 2½ net acre minimum parcel size only where consistent with the existing Sewage Disposal ordinance.

- **5.5.5 (LCP) Minimum Size for Developing Existing Parcels of Record in Water Supply Watersheds.** Require 1 net acre minimum parcel sizes for development of existing lots of record in Water Supply Watersheds in the Coastal Zone and in the North Coast and Bonny Doon Planning Areas, and in the San Lorenzo Water Supply Watershed, in accordance with the existing Sewage Disposal ordinance and incorporate as General Plan and LCP Land Use Plan requirements the provisions of the existing Sewage Disposal ordinance with respect to Kristen Park and Water Quality Constraint Areas. (See Policy 5.5.6.) (For additional references to "water supply watersheds," refer to Table 7.38.045 in Chapter 7.38. "Sewage Disposal," in the Santa Cruz County Code.

- **5.5.6 (LCP) Land Division and Density Requirements in Water Supply Watersheds.** Outside the Coastal Zone, require new parcel sizes to be an average of at least 10 gross acres in existing or proposed Water Supply Watersheds and allow a maximum average residential density of one dwelling unit per 10 gross acres for parcels which are not divided. Inside the Coastal Zone, require new parcel sizes to be an average of at least 20 gross acres in existing and proposed Water Supply Watersheds and within the North Coast and Bonny Doon Water Supply Watersheds extending outside the Coastal Zone, and allow a maximum average residential density of one dwelling unit per 20 gross acres for parcels which are not divided. These restrictions do not apply in the San Lorenzo River Watershed on lands:

  a. designated Urban Residential or Suburban Residential, or

  b. designated Rural Residential areas where the average parcel size within one-quarter mile of the subject parcel boundary is less than 1 gross acre. (See Policy 5.5.5.)

- **5.5.7 (LCP) Land Division and Density Requirements in Least Disturbed Watersheds**[1]. Maintain Least Disturbed Watersheds in open space densities by requiring an average 40 gross acre minimum parcel size for new parcels within Least Disturbed Watersheds and permit land divisions only where consistent with open space protection and where beneficial to the public, such as parcels for public facilities including public well sites, fire stations and utility rights-of-way. Allow a maximum average residential density of one dwelling unit per 40 gross acres for parcels which are not divided.

Additional policies address protection of surface water supplies with regard to "septic constraint areas" (e.g., those areas with noted high groundwater conditions, poor soil conditions for septic systems or noted septic tank system problems, and lands identified as primary groundwater recharge areas). The Santa Cruz County Environmental Health Services Department uses maps displaying groundwater recharge areas, water supply watersheds, and soil types to identify septic constraint areas (Ricker, pers. comm., 2006). Analyses of mapped data are accompanied by on-site assessments, as necessary.

- **5.5.15 Septic Constraint Area Designation.** Designate those areas having high groundwater conditions, poor soil conditions, known septic system problems or are primary groundwater recharge areas as shown on maps on file with the Director of Environmental Health as Septic Constraint Areas.

- **5.5.16 (LCP) Minimum Lot Size in Septic Constraint Areas.** Require a 15,000 net square foot minimum lot size for existing lots of record in Septic Constraint Areas unless constraint area designation is removed in accordance with the provisions of the Sewage Disposal ordinance.

- **5.5.17 (LCP) Sewage Disposal Ordinance.** Continue to enforce the standards of the County's Sewage Disposal ordinance based on the following:

    a. Do not allow variances to sewage disposal regulations that would permit lots of less than 15,000 net square feet to obtain septic permits when a public water supply is not available.

    b. Permit installation of individual sewage disposal systems within an easement on another lot only to allow repairs of existing systems.

- **5.7.2 (LCP) Minimum Septic System Setback from Natural Waterways.** Prohibit installation of septic tanks or leachfields within 100 feet of all natural waterways including perennial or intermittent streams, seasonal water channels and natural bodies of standing water. An exception may be made for the repair of existing systems, if the 100 foot setback cannot be maintained, and adequate provisions are made for water quality protection.

A similar policy for the protection of groundwater includes the following:

- **5.8.2 (LCP) Land Division and Density Requirements in Primary Groundwater Recharge Areas.** Require new parcel sizes to be an average of at least 10 gross acres for parcels with building sites located in primary groundwater recharge areas and allow a maximum average residential density of one dwelling unit per 10 gross acres for parcels which are not divided. Allow exceptions only where the development is:

    a. located within the Rural Services Line or within the Urban Services Line; and

[1] Least Disturbed Watersheds are as follows: Waddell Creek Watershed, including Blooms Creek; Scott Creek and Big Creek Watershed above their confluence, and Scott Creek tributaries below Swanton Road; Jamison Creek Watershed; Clear Creek Watershed; Fall Creek Watershed; Eagle Creek Watershed; Greenoaks Creek; Ano Nuevo Creek; Molino Creek; Baldwin Creek and Peasley Creek, above Highway 1; Wilder Creek, above Highway 1; Laguna Creek and Majors Creek, designated corridors between Highway 1 and the City of Santa Cruz water diversions.

b. served by a sewage disposal system operated by a County Service Area or public services district which provides at least secondary treatment with nitrogen removal or which disposes of effluent outside the primary groundwater recharge area.

Public Safety and Noise Element

This General Plan element includes policies that address reduction of safety hazards and property damage caused by landslides and other ground movements and flooding. Policies are included that relate to siting of septic systems and leachfields.

- **6.2.7 (LCP) Location of Septic LeachFields.** Prohibit the location of septic leachfields in areas subject to landsliding, unless investigation by a certified engineering geologist demonstrates that such placement will not adversely affect slope stability.

- **6.4.5 (LCP) New Parcels in 100-Year Floodplain.** Allow the creation of new parcels, including those created by minor land division or subdivision, in 100- year floodplains only under the following circumstances:

  a. A full hydrologic report and any other appropriate technical report must demonstrate that each proposed parcel contains at least one building site, including a septic system and leachfield site, which is not subject to flood hazard, and that public utilities and facilities such as sewer, gas, electrical and water systems can be located and constructed to minimize flood damage and not cause a health hazard.

  b. A declaration indicating the limits and elevations of the one-hundred year floodplain certified by a registered professional engineer or surveyor must be recorded with the County Recorder.

  c. Adequate drainage to reduce exposure to flood hazards must be provided.

  d. Preliminary land division proposals shall identify all flood hazard areas and the elevation of the base flood. (Revised by Res. 81-99)

- **6.4.9 (LCP) Septic Systems, Leachfields, and Fill Placement.** Septic systems and leachfields to serve previously undeveloped parcels shall not be located within the floodway or the 100-year floodplain. The capacity of existing systems in the floodway or floodplain shall not be increased. Septic systems shall be designed to avoid impairment or contamination. Allow the placement of fill within the 100-year floodplain in the minimum amount necessary, not to exceed 50 cubic yards. Fill shall only be allowed if it can be demonstrated that the fill will not have cumulative adverse impacts on or off site. No fill is allowed in the floodway. (Revised by Res. 81-99)

Parks, Recreation and Public Facilities Element

This general plan element addresses, in part, provisions for sanitation facilities in rural areas. Applicable policies that are intended to prevent environmental degradation from development not served by public sewage disposal systems include the following:

- **7.21.2 (LCP) Minimum Parcel Sizes and Maximum Densities With Individual Sewage Disposal Systems.** Where individual sewage disposal systems are used, require a minimum parcel size to be based on the Rural Density Matrix for the land use designation, but in no case smaller than 1 net acre for parcels

created from new land divisions. Allow a maximum density based on the Rural Density Matrix and not to exceed one dwelling unit per net acre for such parcels.[2]

- **7.21.3 Maximum Slopes for Individual Sewage Disposal Systems.** Prohibit the placement of individual sewage disposal systems on sites with slopes greater than 30 percent (except system repairs on slopes up to 50 percent) to prevent downhill surfacing of effluent from sewage disposal drainage fields.

- **7.21.4 (LCP) Alternative Sewage Disposal Systems.** Allow alternative individual sewage disposal systems, which provide an environmentally acceptable level of treatment, as an alternative to conventional individual sewage disposal systems in rural areas. Such alternative systems must be approved by the Regional Water Quality Control Board and the County Environmental Health Services.

Proposed Santa Cruz Sandhills Regional Habitat Conservation Plan

The Santa Cruz Sandhills is a unique community of plants and animals that are found only in Santa Cruz County. The Sandhills contain a wealth of biodiversity, including four species of plants and two species of insects that occur nowhere else in the world. Resident plants and animals are limited to outcrops of sandy soil found near the towns of Bonny Doon, Boulder Creek, Ben Lomond, Felton, and Scotts Valley. Two unique communities are found on the Sandhills. "Sand chaparral" is dominated by shrub species including manzanita. "Sand parkland" is characterized by stands of towering ponderosa pines with a diverse understory of native wildflowers. Santa Cruz County and the City of Scotts Valley have been coordinating with USFWS to develop a draft Interim Programmatic Habitat Conservation Plan (IPHCP) that proposes an off-site mitigation program for landowners in the sandhills region whose properties are zoned residential within existing residential areas on parcels smaller than 1 acre. Lands surrounding the mitigation site include partially intact sandhills habitat. USFWS is preparing an environmental assessment on the IPHCP, which is part of the 3- to 5-year project to develop a regional HCP.

Riverside County

Riverside County is the fourth largest county in the state, encompassing a total of approximately 4,736,000 acres (7,400 square miles) (Riverside County 2003a). The county is located in Southern California, extending westward from the Colorado River to within 14 miles of the Pacific Ocean. Riverside County is part of the "Inland Empire," which is the popular name for the region that lies eastward of the greater Los Angeles area. The geophysical environment in the county includes deserts, rugged hills, snowcapped peaks, valleys, forests, and agricultural lands. The county is roughly divided into western and eastern halves by the San Jacinto and Santa Rosa Mountains. The San Bernardino and Little San Bernardino Mountains form a portion of the northern boundary, and other mountain ranges, including those in the Santa Rosa Wilderness and Cleveland National Forest, serve as boundaries along the southern and western edges of the county.

According to DOF data, total population in the county in 2000 was estimated at 1,553,902 people (DOF 2004). Between 1994 and 1999 Riverside County was estimated to have grown by over 96,000 people, or approximately 7%. The eastern area grew at a faster pace than the western area—11% and 6%, respectively. The unincorporated areas within the county grew by 1.1%, which represents a significantly slower rate than the region or the county as a whole. The 1999 population in the county was estimated at 1,473,307 persons. Although the eastern half of the county has grown at a faster rate than the western half over the past several years, the greatest concentration of population is in the west side of the county, where growth pressures have historically been highest.

[2] The "rural density matrix" refers to a system used to determine the allowable residential density on lands designated Mountain, Rural, or Suburban Residential, which is further described in the Santa Cruz County General Plan under Policy 2.3.1 (LCP) (Santa Cruz County 1994).

Riverside County Integrated Project

Based on anticipated future growth in the region and the county and a stated interest by County officials and the public in creating a livable environment, Riverside County created a coalition of stakeholders to develop a comprehensive program to simultaneously prepare environmental, transportation, housing and development guidelines for the county for at least the next 20 years. The Riverside County Integrated Project (RCIP) includes a Multiple Species Habitat Conservation Plan (MSHCP) (further described below), the Community Environmental Transportation Corridor Acceptability Process (CETAP), and the Riverside County General Plan update. A diverse and expanded stakeholder group served as the General Plan Advisory Committee (GPAC). The General Plan was adopted by the Board of Supervisors on October 7, 2003.

CETAP is a joint venture between Riverside County and the Riverside County Transportation Commission that addresses the need for four future transportation corridors in the western part of the county. The overall goal of CETAP is to improve mobility both within Riverside County and in Southern California. CETAP is an essential component of the circulation element of the County General Plan and its arterial highway plan.

Based on guidance from the Riverside County General Plan, the County is directing future growth to areas that are well served by public facilities and services (Riverside County 2003a). The Land Use Element of the Riverside County General Plan designates the general distribution, general location, and extent of land uses, including housing, business, industry, open space, agriculture, natural resources, recreation, and public/quasi-public uses. The Land Use Element also discusses the standards of residential density and non-residential intensity for the various land use designations. The multipurpose Open Space Element of the General Plan addresses the protection and preservation of natural resources, management of agriculture and open space areas, management of mineral resources, preservation and enhancement of cultural resources, and provision of recreational opportunities.

Policies are listed below that address provision of adequate public facilities in rural areas and approaches to wastewater treatment related to protection of water quality. A policy has been included below that addresses areas that are prohibited from development based on the location of groundwater recharge areas that underlie land that otherwise may be developable. This policy contributes to the body of guidelines and regulations in the county that relate to siting of OWTS by discouraging development in groundwater recharge areas where groundwater levels may be high, a condition that would likely make them unsuitable for septic systems.

In comparison to the Santa Cruz County General Plan, the Riverside County General Plan includes relatively few policies that specifically address siting of OWTS. Refer to the sections below, "Local Regulatory Guidance Processes For Siting and Management of OWTS," and "Santa Ana Regional Water Board (Region 8)," for further discussions on siting and management of OWTS in Riverside County.

Land Use Element

Rural

- **Policy LU 17.2:** Require that adequate and available circulation facilities, water resources, sewer facilities and/or septic capacity exist to meet the demands of the proposed land use.

Multipurpose Open Space Element

Water Quality

- **Policy OS 3.1:** Encourage innovative and creative techniques for wastewater treatment, including the use of local water treatment plants.
- **Policy OS 3.2:** Encourage wastewater treatment innovations in rural areas.

Groundwater Recharge

- **Policy OS 4.7:** Offer incentives to landowners whose property is prohibited from development due to its retention as a natural groundwater recharge area. These incentives shall be provided to encourage the preservation of natural water courses without creating undue hardship on the owner of properties, and might include density transfer mechanisms.

Western Riverside County Multiple Species Habitat Conservation Plan

The Riverside County Board of Supervisors adopted the Western Riverside County MSHCP in June 2003, which is focused on conservation of species and their associated habitats in western Riverside County (Riverside County 2003b). It is one of several large, multi-jurisdictional habitat planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within an urbanizing region. Large-scale HCP planning efforts have been completed in other Southern California counties and a similar effort is underway in the Coachella Valley in Riverside County. The MSHCP will allow Riverside County and its cities to better control local land use decisions over the next several decades while addressing the requirements of the state and federal Endangered Species Acts.

The MSHCP plan area encompasses approximately 1.26 million acres (1,966 square miles), and it includes all of the unincorporated Riverside County land west of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of the Cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, and San Jacinto. The plan area extends across many bioregions. Of the total plan area acreage, approximately 218,260 acres are currently developed, approximately 169,480 acres are in agricultural uses, and approximately 871,040 acres are characterized as vacant. Also, of the total approximately 1.26 million acres, roughly 500,000 acres will be contained within the reserve system when it is assembled. The conservation area is intended to provide enhanced habitat for the conservation of 146 plant and animal species.

Approximately 347,000 acres of existing known public/quasi-public lands have formed the initial backbone of the conservation area. An additional approximately 153,000 acres of new conservation lands, referred to as the "criteria area," are planned to increase the total to approximately 500,000 acres. MSHCP policies govern development standards with regard to the MSHCP plan area. In general, public and private development projects—including construction of buildings, structures, infrastructure, and all alterations of the land—are subject to consistency with MSHCP policies that apply outside of those areas that are planned to make up the conservation area (i.e., outside of the criteria area and public/quasi-public lands). The most restrictive development standards apply to lands within the criteria area and for public/quasi-public lands.

Development of single-family detached homes on existing parcels is a "covered activity" within the criteria area. Such development is required to occur in accordance with existing land use regulations, and lot development is determined by factors such as access, topography/terrain, zoning development standards (e.g., setbacks), soil types, location of earthquake fault lines, location of leachfields, presence of oak trees, and location of lots within high fire hazard areas. As part of the County's development review process, County staff determines whether the project is located within an MSHCP "criteria cell;" and if it is, compliance with an associated application process called the Habitat Assessment Negotiation Strategy is required. During the expedited review process for residential lot development within the criteria area, a permittee may negotiate with the property owner to acquire the entire lot, a portion of the lot, or a conservation easement. Property owners may proceed with the permit application for grading and site preparation even if no agreement is reached during the negotiation period; however, the location of the building footprint area and any necessary roads must comply with the requirements of the MSHCP.

Sonoma County

Sonoma County is the most northerly and the largest of the nine counties in the San Francisco Bay Region (Sonoma County 1998). It is located along the Pacific coastline about 40 miles north of San Francisco and the Golden Gate Bridge. The county covers approximately 960,000 acres (1,500 square miles). According to DOF data, total population in the county in 2000 was estimated at 461,347 persons (DOF 2004). Transportation linkages to adjacent counties are limited to a few routes. U.S. 101 is the major north-south route, connecting the county to Marin County to the south and Mendocino County to the north. In 1989, most of the residents in unincorporated areas were concentrated in urban areas located just outside several cities, notably Santa Rosa and Sonoma, and in a number of rural communities.

The cities of Santa Rosa, Rohnert Park, and Cotati are located within the broad, flat Santa Rosa Plain, which lies between the Sonoma Mountains on the east and low coastal hills on the west. The City of Sebastopol lies along the eastern edge of the coastal hills. The sparsely settled western margin of the county along the coastline includes the redwood and mixed conifer forests of the Mendocino Highlands in the north, and hilly oak woodlands, dairy lands, and coastal prairies in the south. The Mayacmas Mountains along the eastern boundary of the county and the Sonoma Mountains enclose the Sonoma Valley, also known as the "Valley of the Moon," which is an agricultural valley extending generally from Santa Rosa southeastward to the City of Sonoma and the marshlands of San Pablo Bay. The City of Petaluma is at the south end of the county. In the north, the Mayacmas Range and Mendocino Highlands enclose the Alexander and Dry Creek Valleys. The Cities of Cloverdale and Healdsburg are located along U.S. 101 and generally at the north and south ends of the Alexander Valley.

The economic base in Sonoma County has shifted somewhat over recent years from resource production to new technology industries, retail trade, and local service jobs. The diversified agricultural industries in the County are continuing, and acres in grape production will increase along with vegetable and nursery crop production. Dairying will continue as a major agricultural industry.

Sonoma County General Plan

The 1989 Sonoma County General Plan was approved by the Sonoma County Board of Supervisors on March 23, 1989. In addition to the seven mandatory elements, Sonoma County elected to include three optional elements: Agricultural Resources, Air Transportation, and Public Facilities and Services. In late 2000, the Sonoma County Permit and Resource Management Department (PRMD) commenced preparation of its 2020 update to the General Plan, referred to as GP 2020. The public comment period on the draft EIR closed on April 17, 2006. The Planning Commission held public hearings through fall 2006 to consider the "public hearing draft" for GP 2020. Following that work, the Planning Commission will present its recommendations regarding GP 2020 to the County Board of Supervisors (Sonoma County 1998). County staff anticipates adoption of GP 2020 in 2007 or 2008 (Gaiser, pers. comm., 2006, 2007).

The public hearing draft of GP 2020 includes a few new draft policies addressing septic systems in the county (Sonoma County in prep.). These draft policies are included below to provide some additional context for understanding the County's intentions for management of OWTS through 2020. The following sections identify policies from four elements of the 1989 General Plan and from GP 2020—Land Use Element, the water resources section of the Resource Conservation Element, and the Public Facilities and Services Element—that provide some context for understanding the County's approach to development. For the most part, the policies listed below from the 1989 General Plan are being carried forward to GP 2020.

Policies from the Land Use Element are listed below that address development densities for residential uses in unincorporated communities. Additional policies and applicable accompanying text relating to development densities for residential uses have been included in the summary below that address suitability of soils for installation of septic systems. A goal and related objective are included that discuss the need for review of environmental suitability criteria by the County to avoid hazardous effects and other deleterious conditions.

The Land Use Element includes brief discussions on the existing water and sewer services in the county. Of the 26 communities in the county, 14 have both sewer and public water systems, eight communities have public water systems and rely on individual septic systems, three communities have neither water nor sewer systems, and one community has a sewer system only. Refer to the section below, "Local Regulatory Guidance Processes For Siting and Management of OWTS," for additional information.

The Public Facilities and Services Element addresses seven types of public services, including the provision and management of water and wastewater services. Although the currently adopted version of this General Plan element does not specifically address management of septic systems, the proposed update of the Public Facilities and Services Element includes a few new objectives and policies that directly or indirectly address septic systems in the county, and they are listed below.

The 1989 General Plan Resource Conservation Element provides for the conservation of natural resources, including soils, water resources, forests, vegetation and wildlife, fisheries, minerals, and other natural resources. The public hearing draft of Sonoma County's GP 2020 encompasses a Water Resources Element, and a few policies that were previously part of the Resource Conservation Element have been revised by the County and are presented below.

Land Use Element

1989 General Plan

The Land Use Element includes a range of objectives and related policies that address residential development types and densities in urban and rural areas (Sonoma County 1998). The following objective and related policy address residential density in areas without sewer systems, as follows:

- **Objective LU-6.3:** Limit residential density to a maximum of one dwelling per acre in unincorporated communities with public water but without sewer systems.

    - Policy LU-6a: General plan amendments which add rural residential development shall not be considered unless at a minimum the proposed new rural residential development: (1) would not result in deficiencies in private or public service capacities, (2) is not located in an agricultural production area and would not adversely affect existing or potential farming operations, (3) is on lands with adequate groundwater and septic waste disposal, and (4) would not adversely affect important natural features or resources.

The Land Use Element also addresses environmental suitability criteria to guide rural and urban growth, as follows:

- **Goal LU-7:** Prevent unnecessary exposure of people and property to environmental risks and hazards. Limit development on lands that are especially vulnerable or sensitive to environmental damage.

    - **Objective LU-7.1:** Restrict development in areas which are constrained by the natural limitations of the land, including but not limited to, flood, fire, geologic hazards, groundwater availability and septic suitability.

Density ranges for Rural Residential areas vary from one to 20 units per gross acre. The maximum density for the range may be applied based on the following parameters: similar density of existing lots in the surrounding area, suitable soils for septic disposal, available water, environmental suitability, access to arterial or collector roads, proximity of commercial services and public services and facilities, and avoidance of significant impacts on agriculture and resource production activities. Lot sizes smaller than 1½ acres may not be created if the residence is to be served by an individual well and a septic system. New lots may be as small as 1 acre if the residence is to be served by a public water system. General plan amendments that are proposed to add the Rural Residential

designation to an area must satisfy several criteria, including the following: "[L]ands shall have sufficient permeability for individual septic systems." (Sonoma County 1998)

Lot size requirements are specified for Limited Commercial and Limited Industrial areas, as follows: "New lots shall not be smaller than 1.5 acres on individual wells and septic systems or 1.0 acre on public water." Similar lot size requirements are specified for Recreation and Visitor Serving Commercial areas, as follows: "Lots shall not be smaller than 1.5 acres on individual wells and septic systems or 1.0 acre on public water." General plan amendments that are proposed to add any of these three designations to rural areas must satisfy several criteria, including a determination regarding the suitability of the land for septic systems. For areas designated as General Industrial, sewer and water service must be available.

Development densities are specified for agricultural areas without reference to requirements related to water service or septic systems. Development densities for areas designated for agricultural uses range between 10 and 320 acres per residential unit, depending on the purpose and intended uses of the land.

The Land Use Element includes a series of policy statements for Resources and Rural Development areas; these policy statements are a subset to the overarching natural resource land use policy. The primary purpose of the Resources and Rural Development area category is to allow for very low density residential development provided that certain natural resources are protected. The purposes of this category include the following: "Protection of county residents from proliferation of growth in areas where there are inadequate public services and infrastructure, including water supply and safe wastewater disposal." Residential density ranges in these areas range from 20 to 320 acres per unit. The minimum parcel size for new parcels is 20 acres; exceptions may be made for clustered development. General plan amendments that are proposed to add the Resources and Rural Development designation to an area must meet one or more of the following criteria, in addition to any applicable planning area policies: "Lands with severe constraints such as steep slopes, areas with faults or landslides, "high" or "very high" fire hazard, marginal or unproven water availability, or limited septic capability."

For planning purposes, Sonoma County is further divided into several planning areas. The Russian River Planning Area is located northwest of the City of Santa Rosa and includes the Russian River resort area, Forestville, Guerneville, Monte Rio, Guernewood Park and Rio Nido. Many residences originally developed as second homes have been converted to permanent residences. Historical problems with septic systems in the Russian River area have resulted in inclusion of the following policy in the 1989 General Plan:

- **LU-13r:** The extension of sewer service to the Mirabel Heights Area is intended solely for the purpose of mitigating public health problems resulting from existing land uses with failing septic systems. Notwithstanding Policies LU-3c, LU-3e, Pf-1d and PF-1e, the following specific policies will govern the establishment and operation of sewer service to the Mirabel Heights Area.

    1. Limit service to existing land uses and vacant parcels within the boundaries of the Mirabel Heights Area Service Area Map, as adopted by Board of Supervisors Resolution #98-0266, adopted March 3, 1998.

    2. The force main pipeline connecting the Mirabel Heights Area to the Forestville County Sanitation District Treatment Plant is intended to provide sewer service only to the Mirabel Heights Area. Connections along the pipeline route between the treatment plant and the Mirabel Heights Area are prohibited.

    3. Requests for sewer service outside the Mirabel Heights Area may be found consistent with the General Plan if they meet all of the following criteria.

        a. The parcel must be occupied by an existing use and front a collection line.

        b. The use must be within 200 feet of the collection line.

c. The parcel must demonstrate a failing septic system, documented by the Well and Septic Section of the Permit and Resource Management Department.

d. The parcel must have conditions which render on-site repair of the failing septic system infeasible, as documented by the Well and Septic Section of the Permit & Resource Management Department.

e. The Forestville County Sanitation District must provide written certification that service capacity is available.

f. The connection is limited to serving development that is consistent with the General Plan and zoning.

GP 2020

The following new policy is included in the Land Use Element of the public hearing draft to further address historical problems with septic systems in the region (Sonoma County in prep.):

- **Proposed Policy LU-15c:** Avoid new urban service areas or entities, except where necessary to resolve water quality problems resulting from failing septic systems.

Public Facilities and Services Element

GP 2020

This element of GP 2020 addresses provision of sewer services in the county and discusses the need to serve smaller communities in unincorporated areas, meet applicable standards for wastewater treatment and disposal, accommodate planned growth and development, and avoid unplanned growth and urban sprawl. The draft update for the Public Facilities and Services Element includes a new goal and related objectives and policies that address extension of sewer service beyond designated urban service boundaries as a possible method to improve water quality where septic systems are failing in existing developments (See proposed Goal PF-1 in the Public Facilities and Services Element [Sonoma County in prep.]).

The County has proposed the potential use of package treatment plants for wastewater treatment, which are modular systems designed to provide treatment and disposal of wastewater where standard septic systems are not feasible, but on a smaller scale than a conventional municipal system (See proposed Policy PF-1k in the Public Facilities and Services Element [Sonoma County in prep.]). New objectives and policies are listed below that are intended to provide the County's framework for management of wastewater in unincorporated areas.

The County has proposed two new policies that address the relationship between siting of septic systems and growth areas in the County:

- **Proposed Policy PF-1l:** Consider use of experimental septic systems only to serve a single land use on a single parcel, and only if the availability of the system does not result in new development except as allowed by the General Plan.

- **Proposed Policy PF-1m:** Where substantial numbers of failing septic systems or other health and safety problems exist outside urban service areas which could be addressed by extension of public sewer service, evaluate the feasibility of enlarging urban service area boundaries to include such areas. The evaluation should assure sufficient capacity to serve existing connections and potential buildout within existing urban service area boundaries.

Resource Conservation Element

Applicable goals and policies from the Resource Conservation Element that address water quality are being replaced for the most part by similar policies, as listed below:

1989 General Plan – Water Resources Section of the Resource Conservation Element

- **Goal RC-3:** Conserve, enhance, and manage water resources, protect their quality, and assure an adequate long term supply of water for domestic, fishing, industrial and agricultural use.
  - **Policy RC-3f:** The Environmental Health Department shall review all subdivisions using septic systems so that leachants do not contaminate groundwater recharge areas. Consider on-site wastewater management districts in important recharge areas.
  - **Policy RC-3g:** Consider on-site wastewater management districts in areas with septic problems.
  - **Policy RC-3i:** Actively pursue the abatement of failing septic systems near waterways.

GP 2020 – Water Resources Element

- **Proposed Goal WR-1:** Protect, restore and enhance the quality of surface and groundwater resources to meet the needs of all beneficial uses.
  - **Proposed Policy WR-1d:** Support RWQCB waste discharge requirements for all wastewater treatment systems and other point sources.
  - **Proposed Policy WR-1e:** Participate in the development of Total Maximum Daily Loads (TMDLs) for the impaired water bodies and pollutants of concern identified by the RWQCB to achieve to the maximum extent practicable compliance with adopted TMDLs. Work with the RWQCB to develop and implement measures consistent with the adopted TMDLs.
  - **Proposed Policy WR-1k:** Consider development or expansion of community wastewater treatment systems in areas with widespread septic system problems which are a health concern and cannot be addressed by on-site maintenance and management programs.
  - **Proposed Policy WR-1n:** Consider on-site wastewater management districts in areas with septic problems.
  - **Proposed Policy WR-1o:** Actively pursue the abatement of failing septic systems that have been demonstrated as causing a health and safety hazard.
  - **Proposed Policy WR-1p:** Require new development projects to evaluate and consider naturally-occurring and human caused contaminants in groundwater.

Inyo County

Inyo County is the second largest county in California, with a total land area of approximately 10,140 square miles or about 6.5 million acres (Inyo County 2001). Only 1.9% of the total land area is held in private ownership. Various federal agencies own 91.6% of the land area. Other landowners include the State of California, the Los Angeles Department of Water and Power (LADWP), and local agencies. Indian reservation lands account for 0.3% of the total. As a result of the pattern of public land ownership and its remoteness, Inyo County is generally rural in character, and the countywide population in 2000 was estimated at 18,257 people (DOF 2004). Bishop is

the only incorporated city in the county. Most of the county's population and businesses are clustered in communities along Highway 395, which serves as the primary north-south transportation link through the county.

Both the lowest elevation in the Western Hemisphere and the highest point in the continental U. S. are located in Inyo County. At -282 feet below sea level, Badwater in Death Valley is the lowest, and at 14,497 feet above sea level, Mount Whitney is the highest. In addition to Death Valley, dramatic and contrasting geophysical elements in the county include the Sierra Nevada, the Inyo and White Mountains, and the Owens Valley.

Various planning documents guide land use decisions in the county. The Inyo County General Plan influences, but does not control activities within non-jurisdictional areas, including the City of Bishop and lands under federal management. Lands owned by LADWP are subject to the County's General Plan for issues related to land development and use (Inyo County 2001). Federal agencies that own and manage lands in Inyo County include the National Park Service (Death Valley National Park, Inyo National Forest), the U.S. Bureau of Land Management, U.S. Forest Service, and U.S. Department of Defense (China Lake Naval Weapons Center).

Inyo County General Plan

The 2001 Inyo County General Plan Update was approved by the Inyo County Board of Supervisors on December 11, 2001. It addition to the general plan elements mandated by State law, Inyo County elected to include two optional elements: the Government Element (addressing County expectations for the management of publicly owned and managed lands), and the Economic Development Element (Inyo County 2001). The policies of the Inyo County General Plan require that project design reflect and consider natural features, suitability of soils, availability of water, hazards, circulation, and the relationship of the project to surrounding uses.

The following sections identify General Plan policies from four elements of the General Plan—Land Use, Public Services and Utilities, Conservation and Open Space, and Public Safety—that provide some context for understanding the County's approach to development. The Land Use Element addresses the orderly expansion of communities in the County. Several policies relating to development densities for residential uses have been included in the summary below that specifically address whether or not lots are suitable for installation of septic systems. Additional policies are included that discuss the need for careful review by the County of residential development projects to avoid hazardous effects and other deleterious conditions.

The Public Services and Utilities Element of the Inyo County General Plan includes policies that direct growth in ways that assure adequate provision of public services, including water and wastewater services. The Conservation/Open Space Element addresses several resource conservation topics, including soils. A policy that addresses soil limitations with regard to development density and disposal of wastewater is particularly applicable to this discussion. In addition, a soil implementation measure from the General Plan is included in this discussion that specifically addresses siting and management of septic systems. The Public Safety Element identifies goals, policies, and implementation measures to maintain a safe environment and to protect public safety and property. Policies are included that restrict development in the floodplain, and that address geologic issues, including development on slopes.

Selected policies related to the density of development in the County, as well as other applicable policies, are listed below. Refer to the sections below, "Local Regulatory Guidance Processes For Siting and Management of OWTS," and "Lahontan Regional Water Board (Region 6)," for further discussions on siting and management of OWTS in Inyo County.

Residential

Detailed descriptions of land use designations by type are provided in the Land Use Element, including descriptions for nine residential categories. Key parameters for residential development are included that address requirements for disposal of wastewater, as presented in Table 4.3-1.

Table 4.3-1
Sewer/Septic and Water Service for Residential Developments in Inyo County

Residential Land Use Designation	Density	Minimum Parcel Size	Public or Private Sewer/ Septic and Water Services
Residential High Density	15.1 to 24 du/ac	--	Connection to acceptable sewer and water systems is mandatory.
Residential Medium-High Density	7.6 to 15.0 du/ac	--	
Residential Medium Density	4.6 to 7.5 du/ac	--	Connection to acceptable sewer and water systems is mandatory for new subdivisions.
Residential Low Density	2 to 4.5 du/ac	--	Connection to acceptable water and sewer systems is mandatory for new development. Requirements may be satisfied by the development of an individual well or an individual septic system if approved by the Environmental Health Services Department; however, connection to an existing sewer system and connection to a "state small" or "public water system" pursuant to the "California Safe Drinking Water Act" is, where feasible, mandatory for any new development.
Residential Very Low Density	2 du/ac	0.5 acre	
Residential Rural High Density	1 du/ac	1.0 acre	Individual water wells and individual sewage disposal systems are allowed, but community water systems are encouraged.
Residential Rural Medium Density	1 du/2.5 acres	2.5 acres	
Residential Estate	1 du/5 acres	5.0 acres	Individual water wells and individual sewage disposal systems are allowed.
Residential Ranch	1 du/10 acres	10 acres	

Notes:
Development density is shown in dwelling units per acre or du/ac.
Source: Based on Table 4-1, "Land Use Designations by Use Type," contained in the Land Use Element of the Inyo County General Plan (Inyo County 2001), and on the text from Policies LU-2.1–LU-2.9 from the Land Use Element.

- **Policy LU-2.11** Approved Development. The County shall preserve the right of property owners to construct houses on all legally created parcels with a General Plan designation that allows residential uses, unless the County determines that such development would be detrimental to public health, safety or welfare.

- **Policy LU-2.13** Environmental Constraints. The County shall carefully evaluate sites proposed for residential development considering all hazardous and non-hazardous environmental constraints such as floodplains, geologic hazards, and sensitive environmental factors.

Public Services and Utilities Element

Wastewater

- **Policy PSU-4.1** Community Wastewater Treatment Facilities. The County shall limit the expansion of unincorporated, urban density communities to areas where community wastewater treatment facilities can be provided.

- **Policy PSU-4.3** Sewage Disposal Service Districts. The County shall encourage, as an alternative to a sewer system, the creation of Community Service Districts with powers to manage the rehabilitation, replacement, maintenance and monitoring of all on-site septic/leach systems for communities not served by conventional sewer systems.

- **Policy PSU-4.4** Permitting Individual On-site Systems. The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other health hazards and where community sewer service is not available and cannot be feasibly provided.

Conservation/Open Space Element

- **Policy S-2.2** Soil Limitations. Require low-density development in areas where soils have moderate or severe limitations for sewage disposal, unless infrastructure exists for a public sewer system.

    - Implementation Measure. All development proposed to utilize septic systems shall comply with Environmental Health Department and LRWQCB requirements for siting and installation. Development of shared/community septic systems and in areas known to have septic tank failures shall be required to provide a soils test showing on-site and cumulative area capabilities to support the proposed system. Septic tanks on lots smaller than ½ acre are prohibited by LRWQCB.

Public Safety Element

Geologic and Seismic Hazards

Policy GEO-1.5 Slope Constraints. Restrict development on steep slopes (defined as slopes greater than 30%).

Town of Paradise

The incorporated Town of Paradise is located in Butte County in the Sierra Nevada foothills of Northern California. The elevation of Paradise ranges from 1,200 to 2,400 feet above mean sea level. The Town covers approximately 18 square miles, and it is one of the largest unsewered incorporated towns in the U.S. The Paradise area includes the communities of Magalia, Paradise Pines, Lovelock, Stirling City, and Inskip. The West Branch Feather River flows along the eastern edge of the town. According to DOF data, total population in Paradise in 2005 was estimated at 26,500 persons (DOF 2005). Approximately 50% of the population in the town is over age 55. No major industries are located in the area.

Town of Paradise General Plan

The Town of Paradise 1994 General Plan was adopted by the Town Council on October 4, 1994, and incorporates amendments through January 2005 (Town of Paradise 2005). It is intended to direct land use decisions over a 15-year period. In addition to the seven mandatory elements, Paradise elected to include an optional element—Education and Social Services. Although the community is relatively small, the Town considers its General Plan as a growth management plan, and similar to larger municipalities, the Town is balancing the inevitable

population growth with provision of public services and infrastructure, while preserving open space and the small town environment that its residents enjoy.

The General Plan lists strategies for growth management, which include controlling density of development by planning for creation of medium to large land parcels. The General Plan specifies allowable densities of development for residential uses. Areas designated as Multi-Family Residential are allowed a maximum density of ten dwelling units per net acre. In areas where the Town-Residential designation is applied, parcel sizes are generally one-half acre or less. Residential densities are in the range of one to three dwelling units per gross acre. This residential use category allows for single-family attached and detached homes, mobile home parks, and certain public uses. The Rural-Residential designation provides for single-family detached homes and secondary residential units as well as accessory rural uses and certain public uses. Allowable densities range from one to two dwelling units per gross acre. The Agricultural-Residential designation applies to existing and planned residential areas characterized by larger parcels and accessory agricultural uses. Allowable densities are one or fewer dwelling units per gross acre.

Selected policies related to density of development in Paradise and development constraints are listed below. Refer to the section below, "Local Regulatory Guidance Processes For Siting and Management of OWTS," for additional information on the Town of Paradise.

Land Use Element

- **Objective LUO 15:** Establish a single-family residential density sufficient to allow adequate room on lots for mature trees, septic systems, and buffers between residences.

    - **Policy LUP-47:** Residential densities shall be consistent with standards for on-site wastewater disposal and other infrastructural constraints, and shall provide for newly created minimum lot sizes of not less than one-half acre gross in new developments.

Safety Element

- **Policy SP-16:** The town should require all development proposals on sites which contain slopes exceeding twenty percent, and/or which border or include significant and sensitive stream courses or natural drainageways, to include programs for replanting and slope stabilization, erosion control plans, and to incorporate designs which minimize grading and cut-and-fill.

- **Policy SP-17:** Building on slopes in excess of thirty percent should not be permitted.

PROTECTION OF WATER QUALITY IN CALIFORNIA

Introduction and Overview

The primary responsibility for the protection of water quality in California rests with the State Water Board and the nine regional water boards, which were established in their current form by the Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) (Water Code Section 13000 et seq.). The State Water Board sets statewide policy for the implementation of state and federal laws and regulations. The boundaries of the regional water boards are based on the locations of major watersheds. The regional water boards are charged with developing and enforcing water quality objectives and implementation plans that will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geology, and hydrology. Each regional water board makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions.

Each regional water board adopts and implements a Water Quality Control Plan (Basin Plan), which provides the scientific and regulatory basis for its actions. The Basin Plans designate beneficial uses of water, establish water quality objectives to protect those uses, and contain a program to implement the objectives. Basin Plans must conform to State policy for water quality control, and they must be approved by the State Water Board. The Porter-Cologne Act and the federal Clean Water Act (CWA) mandate periodic review of Basin Plans (Water Code Section 13240, Section 303[c][1] CWA). The review mandated by the CWA takes place every 3 years, and is commonly referred to as the triennial review. Adoption of a Basin Plan and any amendment thereto is subject to a public process, requiring a hearing and subsequent approval by the State Water Board. Public comments received may be combined with issues identified by regional water board staff to formulate and adopt priority lists for future Basin Plan amendments. The regional water board may also initiate Basin Plan amendments outside of the regular review process to address issues that arise.

Sections 13000–13002 of the Water Code establish the overarching policy for water quality control under the Porter-Cologne Act. Section 13000 declares that the people of California have a primary interest in the conservation, control, and utilization of the water resources of the state, and that all waters of the state shall be protected for use and enjoyment by the people. Section 13001 assigns primary responsibility for the coordination and control of water quality to the State Water Board and the regional water boards. Section 13002 specifies limitations on the provisions set forth in this division of the Water Code, including the following:

> *No provision of this division or any ruling of the state board or a regional board is a limitation [o]n the power of a city or county or city and county to adopt and enforce additional regulations, not in conflict therewith, imposing further conditions, restrictions, or limitations with respect to the disposal of waste or any other activity which might degrade the quality of the waters of the state.*

As provided in law, local jurisdictions often exercise their authority to adopt specific guidelines and standards to protect water quality. Local agencies also acknowledge the requirement to comply with the minimum standards contained in the respective Basin Plans (discussed under the section, "Local Regulatory Guidance Processes For Siting and Management of OWTS").

CEQA Review of State Water Board Activities

Certain activities of the State Water Board are subject to environmental review under CEQA. Adoption of a rule or regulation requiring the installation of pollution control equipment, or a performance standard or treatment requirement, requires preparation of an environmental analysis, which must include an analysis of the reasonably foreseeable environmental impacts of the methods of compliance (Public Resources Code Section 21159, State CEQA Guidelines Section 15187).

CEQA also addresses the detailed conditions under which a plan or other written document prepared under the regulatory program of a State agency may be submitted in lieu of an EIR, subject to certification of the regulatory program by the Secretary of the Resources Agency (Public Resources Code Section 21080.5). Since 1980, the planning programs of the State Water Board and the regional water boards have incorporated the necessary documentation related to environmental review as part of the process to adopt the respective Basin Plan amendments, in accordance with the requirements of Section 21080.5 of the Public Resources Code.

Permitting, Investigation, and Enforcement

Any person discharging or proposing to discharge waste that could affect water quality must file a report of waste discharge (ROWD) with the regional water board, unless the regional water board waives the filing. A report is also required if the discharger proposes a material change in the character, volume, or location of a discharge. The regional water board must then issue waste discharge requirements (WDRs) to the discharger, unless requirements are waived. The WDRs must implement applicable State policies and the body of regulatory guidance contained in the regional water board's Basin Plan. WDRs may either be individual or general, for a category of discharges.

The requirements can also prohibit the discharge of waste or certain types of waste, either under certain conditions or in specified areas. The requirement to file an ROWD applies to discharges to land as well as to surface and groundwater. For example, the Santa Ana Regional Water Board requires WDRs for mobile home parks that rely on community-sized OWTS, which involves a discharge of wastewater to land with the potential to impact water quality by affecting underlying groundwater basins (Santa Ana Regional Water Board 1995).

The State Water Board and the regional water boards have broad powers to investigate water quality in connection with any action authorized or required under the Porter-Cologne Act, including the development or review of Basin Plans or WDRs. These investigative powers include the authority to conduct sampling or to require monitoring reports from any person discharging or suspected of discharging waste. Regional water boards are authorized to take enforcement actions ranging from orders requiring relatively simple corrective actions to monetary penalties in order to obtain compliance with WDRs. Regional water boards can use their enforcement authority to respond to unauthorized discharges, discharges in violation of WDRs or waste discharge prohibitions, discharges that cause or threaten to cause pollution or nuisance, and violations of monitoring or reporting requirements.

The State Water Board or regional water boards may waive issuance of WDRs if it is determined that such waiver is consistent with any applicable State or regional water quality control plan and is in the public interest, pursuant to Section 13269 of the Water Code. WDRs can be waived for a specific discharge or types of discharges. A waiver of WDRs is conditional and may be terminated at any time by the regional water board. The conditions of the waiver shall include, but need not be limited to, the performance of individual, group or watershed-based monitoring, unless the State Water Board or regional water board determines that the discharge does not pose a significant threat to water quality. The State Water Board or regional water board can waive the ROWD requirement, the WDRs requirement, or both. A waiver may not exceed five years in duration.

The regulation of individual OWTS generally does not involve issuance of WDRs by the regional water board. The authority for oversight and regulation of septic systems typically is conditionally delegated to the local governing body (e.g., the County Environmental Health Services Department) under an MOU with the regional water board. Permitting occurs through the local agency that has the MOU with the regional water board. In the past, many regional water boards have waived the requirement for WDRs for OWTS that are permitted by the local agency. Under these MOUs, the local agency is ultimately responsible for ensuring compliance with the applicable Basin Plan.

Also, regional water boards typically address specific discharge prohibitions in their respective Basin Plans, which may include limitations on discharge of wastewater in certain areas. For example, the Lahontan Regional Water Board has identified various waste discharge prohibitions within the Truckee River hydrologic unit, including a prohibition on the discharge of wastes or wastewater to individual disposal facilities within two subdivisions in the region. Exemptions to prohibitions may be allowed if scientific evidence is presented demonstrating that operation of certain facilities will not adversely affect water quality or beneficial uses, provided that these facilities are operated in accordance with any statutory provisions addressing specific types of prohibitions. Sections 13280–13283 of the Water Code govern prohibition of discharges from existing or new individual disposal systems or from community collection and disposal systems that utilize subsurface disposal of wastes.

REGIONAL WATER QUALITY CONTROL BOARDS

This section of the land use analysis provides overviews of two of the regional water boards—Lahontan (Region 6) and Santa Ana (Region 8)—and provides some context for understanding the shared authority between the regional water boards and local agencies that permit and regulate the installation, maintenance, and repair of OWTS.

Lahontan Regional Water Board (Region 6)

Introduction and Overview

The jurisdiction of the Lahontan Regional Water Board extends from the Oregon border to the northern Mojave Desert and includes all of California east of the Sierra Nevada crest. For planning purposes, it has historically been divided into North and South Lahontan Basins at the boundary between the Mono Lake and East Walker River watersheds. Millions of people visit the region annually, and tourism is a major industry. Other major sectors of the economy are resource extraction (mining, energy production, and silviculture), agriculture (mostly livestock grazing), and national defense installations and activities (Lahontan Regional Water Board 1995).

Basin Plans were adopted by the regional water board for the North and South Lahontan Basins in 1971, which were subsequently amended in 1972 and 1973. Work on revisions to these Basin Plans continued, leading to adoption by the State Water Board of the North and South Lahontan Basin Plans in 1975. Amendments to the North and South Lahontan Basin Plans adopted between 1975 and 2005 were incorporated into the current Basin Plan. Progress has been made toward the control of several water quality problems identified in the 1975 Basin Plans, including nonpoint source problems at Lake Tahoe and Mammoth Lakes (i.e., discharge from diffuse sources), acid mine drainage from the Leviathan Mine, and problems associated with septic systems in some specific areas.

Water quality problems in the Lahontan Region are largely related to nonpoint sources (e.g., erosion from construction, timber harvesting, and livestock grazing), stormwater runoff, acid drainage from inactive mines, and individual OWTS. Most of the population in the Lahontan Region is concentrated in a few high density communities, which has important implications for areas with no community wastewater treatment facilities (Lahontan Regional Water Board 1995).

Several small community wastewater treatment systems are located in basins of the Lahontan Region. These systems include oxidation pond systems and other small communities and facilities that discharge to community leachfield systems. A total of nine such facilities in the North Lahontan Basin are regulated by WDRs. In the South Lahontan Basin, many small communities and facilities use separate wastewater treatment and disposal systems. Approximately 64 systems are regulated under WDRs in the South Lahontan Basin, including wastewater treatment systems located in Inyo County. (Refer to the discussion below under, “Local Regulatory Guidance Processes For Siting and Management of OWTS,” for further discussion of management of OWTS in Inyo County.)

Management Oversight of OWTS in the Lahontan Region

The Lahontan Regional Water Board enters into MOUs with local governing bodies for implementation of regionwide septic system criteria, including density limits (Lahontan Regional Water Board 1995). The Basin Plan for the Lahontan Regional Water Board outlines the minimum criteria, principles and policies that are applied in the review of water quality factors relating to land developments and waste disposal from individual waste disposal systems. The criteria apply to the entire Lahontan Region and pertain to all proposed building that involves wastewater discharges to other than a community sewer system, including: (1) proposed building on lots within new subdivisions or parcels, (2) proposed building on existing subdivided lots or parcels, and (3) proposed subdivisions. The criteria do not apply to: (1) existing individual waste disposal systems, or (2) projects for which final building permits were issued prior to June 16, 1988, unless evidence exists demonstrating the need to retrofit septic systems to conform with the current criteria (Lahontan Regional Water Board 1995). These criteria do not apply to projects within septic system prohibition areas where the criteria are more stringent; conversely, these criteria will preempt less stringent criteria in septic system prohibition areas. Where community sewer systems are available, the Lahontan Regional Water Board will encourage connection to the sewer system.

The minimum criteria for management of individual wastewater treatment systems in the Lahontan Region are summarized as follows:

- Gross density greater than two single-family "equivalent dwelling units" per acre are required to have secondary level treatment of wastewater. (Equivalent dwelling units [EDUs] are a unit of measure used for sizing a development based on the amount of waste generated from that development; as used in the Basin Plan, the value is 250 gallons per day [gpd] per EDU, and the discharge from a single-family dwelling is equal to one EDU.)

- Use of new septic systems is permitted in existing developments with lot sizes having a net area greater than or equal to 15,000 square feet (approximately one-third acre).

- Percolation rates in the disposal area cannot be slower than 60 minutes per inch (mpi) if the discharge is to a leachfield, or 30 mpi if discharge is to a seepage pit.

- Where percolation rates are faster than 5 mpi, the total thickness of soil beneath the leaching trench may vary in depth from 5–40 feet, depending on the percolation rate and the size and quantity of rocks in the soil. The percolation rates are determined in accordance with procedures prescribed by the appropriate local public health agency (e.g., the Inyo County Environmental Health Services Department).

- Clay, bedrock, other impervious material, or fractured bedrock may not be less than 5 feet below the bottom of the leaching trench or less than 10 feet below the bottom of the seepage pit.

- Depth to high groundwater may not be less than 5 feet below the bottom of the leaching trench, nor may it be less than 10 feet below the bottom of the seepage pit. Greater depths are required if the native material does not provide adequate filtration.

- Ground slope in the disposal area may not exceed 30%.

- Minimum specified criteria must be met within the area of the proposed system and within the 100% expansion area for the proposed system.

Minimum horizontal distances between OWTS components and wells or water features are as follows:

- 50 feet between a septic tank and either a domestic or public well. 100 feet between a leachfield and a domestic or public well. 150 feet between a seepage pit and a domestic or public well.

- 50 feet between a septic tank and a perennial stream. 100 feet between a leachfield or seepage pit and a perennial stream. 25 feet between a septic tank and a drainage course or ephemeral stream. 50 feet between a leachfield or seepage pit and an ephemeral stream.

- 50 feet between a septic tank and a lake or reservoir. 200 feet between a leachfield or seepage pit and a lake or reservoir.

In certain locations and under special circumstances, the regional water board or its Executive Officer may waive individual criteria.

The implementation of minimum criteria for management of individual wastewater treatment systems in the Lahontan Region are summarized as follows:

- The regional water board and local agencies adopt MOUs, which include criteria that are consistent with or more stringent than those listed above.

- The MOUs include the review procedures and the processing requirements for applications related to the proposed discharge of wastewater from land developments that only discharge domestic waste, including residential, commercial, industrial, or recreational developments.

- For those local agencies that have adopted these or more stringent criteria, land developments that only discharge domestic waste are permitted entirely by the local agency.

- In situations where the proposed development will not meet the minimum criteria and no MOU or equivalent document exists between the regional water board and the local agency, applications for all projects are transmitted to the regional water board along with a complete ROWD and a filing fee.

- Ultimate authority rests with the regional water board to prohibit the discharge of wastes from land developments that will violate water quality objectives; impair beneficial uses of water; or pollute, contaminate, or degrade the quality of any waters in the state.

In areas where conditions do not support the use of conventional individual wastewater disposal systems, installation of engineered alternative systems may be considered (Lahontan Regional Water Board 1995). Alternative systems may include mound systems[3], evapotranspiration beds, sand filters (intermittent and/or recirculating), and lined evaporation ponds. Although the Lahontan Regional Water Board supports the use of engineered alternative systems on existing lots that are otherwise unsuitable for conventional systems, it discourages the use of engineered alternative systems for new construction, on new lots or in new subdivisions.

Several factors will be considered by the regional water board and/or the Local Health Officer (e.g., the Director of the Inyo County Environmental Health Services Department) when evaluating a proposal for use of an alternative system, including the following:

- size of parcel;
- density of surrounding development;
- depth to groundwater and bedrock;
- depth of soils and their suitability for conveyance of waste disposal;
- climate;
- access for maintenance and pumping and to control public access;
- emergency contingency plans, including plans for expansion, replacement, or repair; and
- distance to sewer.

The conditions that limit the use of conventional systems (e.g., soils, depth to groundwater, slope) may also apply to alternative systems that rely on soil absorption for treatment and/or disposal of all or most of the wastewater generated.

Santa Ana Regional Water Board (Region 8)

Introduction and Overview

At 2,800 square miles, the Santa Ana Regional Water Board covers the smallest area of the nine regions. Although it is small, the area is densely populated with over 4 million residents. Most of the population is concentrated in urban areas where high density development on small lots is typical. Centralized sewers are not available in many areas where rapid growth is occurring; therefore, this high density residential growth includes installation of on-site sewage disposal systems (Santa Ana Regional Water Board 1995). The Santa Ana Region lies roughly between Los Angeles and San Diego. It includes the upper and lower Santa Ana River watersheds, the San Jacinto River watershed, and several other small drainage areas. In broad terms, the Santa Ana region is a

[3] Based on the proposed regulations, it is noted that the State Water Board considers mound systems or sand mound systems as a type of conventional treatment system that does not include supplemental treatment components.

group of connected inland basins and open coastal basins drained by surface streams flowing generally southwestward to the Pacific Ocean. The area covers parts of southwestern San Bernardino County, western Riverside County, and northwestern Orange County (Santa Ana Regional Water Board 1995).

The Basin Plan for the Santa Ana River Basin was adopted by the regional water board and approved by the State Water Board in 1975 (Santa Ana Regional Water Board 1995). Amendments to the Basin Plan that were adopted and approved in 1983 included the incorporation of minimum lot size requirements and exemption criteria for the use of septic systems in the Santa Ana Region. In 1989, the State Water Board initiated a statewide program for comprehensive review and update of the Basin Plans by all regional water boards. The Santa Ana Regional Water Board discussed the process to update the Basin Plan at its regular meeting in April 1993. Work on revisions to the Basin Plan continued, leading to adoption by the State Water Board of the Basin Plan for the Santa Ana Regional Water Board in 1994 (Santa Ana Regional Water Board 1995). Since then, triennial review of the Basin Plan has occurred in accordance with the requirements of the CWA. The Santa Ana Regional Water Board commenced the 2006 triennial review process for the Basin Plan when it requested public and stakeholder input on priority issues. On December 1, 2006, the Santa Ana Regional Water Board adopted a resolution approving the 2006 Basin Plan Triennial Review Priority List and Workplan. The current Basin Plan remains in effect until subsequent amendments are adopted and approved.

Management Oversight of OWTS in the Santa Ana Region

The Santa Ana Regional Water Board enters into MOUs with Riverside and San Bernardino Counties for implementation of regionwide septic system criteria (Beeson, pers. comm., 2007). The MOUs cover discharges from developments that are composed only of domestic wastes. Commercial developments discharging more than 5,000 gpd are required to submit a ROWD, which is subject to approval and adoption by the Santa Ana Regional Water Board. OWTS located within waste discharge prohibition areas are subject to concurrent review by the Santa Ana Regional Water Board.

In 1989, the Santa Ana Regional Water Board investigated the nitrate problems occurring in the region and identified a relationship between these high density developments and elevated nitrate levels found in the groundwater (Santa Ana Regional Water Board 1995). As a result of this investigation, on July 16, 1993, the regional water board adopted Resolution No. 89-157, as amended by Resolution No. 93-40, which amended the Basin Plan to add a one-half acre minimum lot size requirement for new developments using OWTS. The minimum lot size requirement does not apply to existing developments where septic systems were installed on or prior to September 7, 1989. Under certain conditions, replacement of an existing septic system is considered to be exempt from the minimum lot size requirements. These exemptions generally include the following:
(1) Replacement of the existing system is necessary to bring the system up to code as required by the local health care agencies and/or the building and safety departments, and (2) Replacement of the existing system is proposed to allow additional flows resulting from additions to the existing dwelling unit.

No exemptions may be granted for new developments on lots smaller than one-half acre that are located within 200 feet of a sewer line that could serve the parcel. For larger developments, the required distance from an existing sewer line varies depending on the number of units in the development. Under certain conditions, the Santa Ana Regional Water Board will consider exemptions to the minimum lot size requirement. Compliance with the regional water board's *Guidelines for Sewage Disposal from Land Developments* (see below) may provide an adequate basis for such an exemption. The Basin Plan for the Santa Ana Regional Water Board includes further detail on lot size restrictions (Santa Ana Regional Water Board 1995).

The Santa Ana Regional Water Board has adopted waste discharge prohibitions in the following areas: Grand Terrace, Homeland-Green Acres, Romoland, and Yucaipa-Calimesa (Beeson, pers. comm., 2007). Continuing exemptions apply in these areas for lots larger than 1 acre, provided that continued use of subsurface leaching percolation systems does not affect water quality. The one-half acre minimum lot size requirement discussed above does not affect the 1 acre minimum lot size criterion for continuing exemptions in prohibition areas, nor

does it preclude the prescription of more stringent lot size requirements in specific areas (Santa Ana Regional Water Board 1995).

The Santa Ana Regional Water Board's *Guidelines for Sewage Disposal from Land Developments* (Santa Ana Regional Water Board 1979) addresses minimum criteria for siting of OWTS, which are summarized as follows:

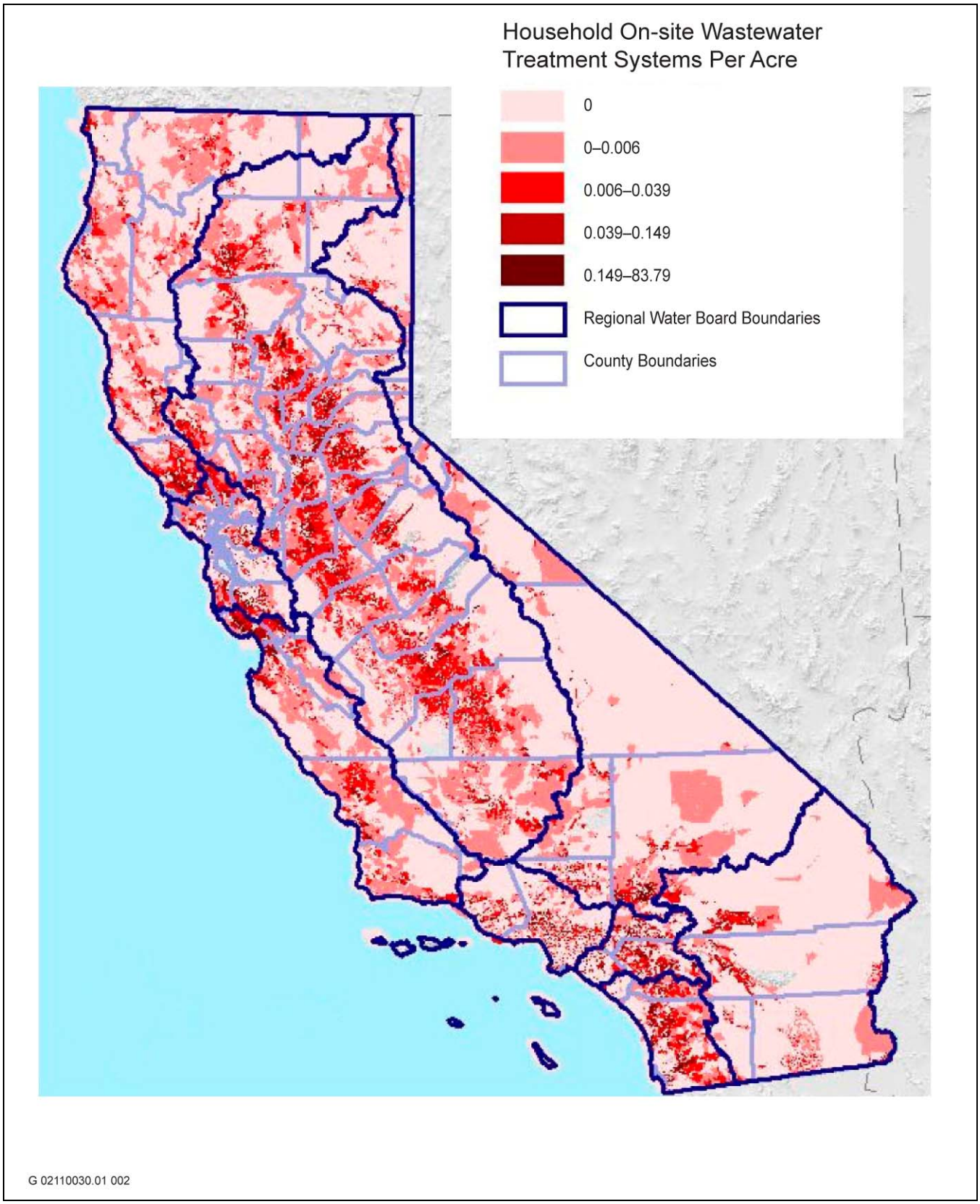
- Depth of soil between ground surface and anticipated high groundwater in the disposal area may not be less than 10 feet.
- Depth of soil containing at least 10% of the particles smaller than 0.08 inches (2 millimeters) between the bottom of the disposal facilities and anticipated high groundwater may not be less than 5 feet.
- Depth of soil between the bottom of any leaching system and any impermeable layer may not be less than 8 feet.
- Natural or graded ground slope in the disposal area may not be greater than 30%.
- Percolation rate in the disposal area may not be greater than 60 mpi if the discharge is to a leachfield, and not less than 1.1 gallons of effluent per square foot per day if the discharge is through a seepage pit. Where percolation rates are faster than 5 mpi, the total thickness of soil beneath the disposal facility may be increased to 40 feet, and additional testing may be required. The percolation rates are determined in accordance with procedures prescribed by the appropriate public agency.
- Compliance with all applicable local criteria is required (e.g., minimum lot sizes, and distances from wells, streams, drainage courses, reservoirs, and adjoining properties).

As discussed previously, the regional water board may adopt waste discharge prohibitions pertaining to certain types of waste or in particular areas, in accordance with Section 13243 of the Water Code (and Sections 13280–13283 of the Water Code, as applicable [discussed above under "Permitting, Investigation, and Enforcement"]). In 1973, and again in 1982, the Santa Ana Regional Water Board adopted prohibitions on the use of OWTS in several areas within its jurisdictional boundary. Investigations by multiple agencies have documented serious water quality issues in the Quail Valley area of Riverside County (San Jacinto River watershed) due to failing septic systems. High groundwater, poor soil conditions, and a lack of regular maintenance of on-site systems have resulted in a high failure rate. On October 3, 2006, the Santa Ana Regional Water Board adopted a Basin Plan amendment to include a phased waste discharge prohibition on the use of on-site subsurface disposal systems in the Quail Valley area. The amendment was approved by the Board (Resolution 2007-0038) at its regularly scheduled Board meeting on June 19, 2007.

LOCAL REGULATORY GUIDANCE PROCESSES FOR SITING AND MANAGEMENT OF OWTS

Earlier discussions in this section provide reviews of local planning processes for selected local municipalities, which are intended to show how development is controlled and guided at the local level through the respective adopted general plans. The middle section of this analysis discusses how activities in the State that affect water quality are regulated at the State level and the process by which that responsibility is shared with the regional water boards. Those discussions are followed in this section with companion discussions that specifically address siting of OWTS for the same five municipalities that were addressed previously. All of these discussions build on a dual theme that describes the shared authority between the governing bodies for regulation of activities in the state that may affect water quality, and the relative autonomy that local jurisdictions exercise in making decisions that affect local environments.

Exhibit 4.3-1 displays the relative densities of OWTS for domestic use throughout the state based on 1990 U.S. Census data. It is reasonable to assume that this pattern has not changed significantly, and that the size and density of areas depicted may have increased slightly in the years since this data was captured. Based on data presented in



Source: State Water Board 2005

Household On-site Wastewater Treatment Systems, Based on 1990 U.S. Census Data Exhibit 4.3-1

Exhibit 4.3-1, no county in the state is without OWTS; therefore, local governing bodies (e.g., cities, towns, counties, and special districts) throughout the state have a level of responsibility for regulatory oversight of OWTS.

Santa Cruz County

Santa Cruz County has a total of over 22,000 septic systems. Of that total, approximately 13,000 are located in the San Lorenzo River Watershed, which has the highest density of septic systems of any comparable area in the state. Applicable standards for management of septic systems in the County are contained in the Basin Plan for the Central Coast Regional Water Board. The authority for oversight and regulation of septic systems in the County has been conditionally delegated to the Santa Cruz County Environmental Health Services Department under an MOU with the regional water board. Any installation, replacement, or significant repair of any part of a septic system requires a permit from the Environmental Health Services Department. The County is required to comply with the minimum standards contained in the Basin Plan (Santa Cruz County 1999).

Many parcels in the County have site constraints that make them unsuitable for conventional septic systems. Possible site constraints include high groundwater conditions, poor soil conditions or noted OWTS problems, and lands identified as primary groundwater recharge areas. "Nonstandard systems" may be permitted on many of these properties using either alternative technologies or special operating conditions (e.g., water conservation) to compensate for a particular constraint.

The County Board of Supervisors adopted Section 7.38 of the County Code, which specifies the standards for septic system installation in Santa Cruz County. Chapter 7.38, "Sewage Disposal," is available online at http://ordlink.com/codes/santacruzco/index.htm. The highly detailed and comprehensive guidelines and regulations for individual sewage disposal facilities in Santa Cruz County are intended to protect the public health, safety, and welfare of residents and to minimize effects on the environment. A general and partial list of constraints regarding the siting of OWTS in the county includes the following:

- Under certain conditions, individual septic systems are allowed on existing lots smaller than 1 acre (e.g., lots that vary in size from under 6,000 sq. ft. to 1 acre). Limitations are generally related to the date of lot creation and whether or not a public water supply is available.
- Under certain conditions, individual septic systems are not allowed on existing lots smaller than 2.5 acres.
- For new development proposed on existing lots within the San Lorenzo River Watershed, a 1 acre minimum lot size is required regardless of the date of lot creation (with a possible exception only for necessary community uses if impacts are mitigated).
- An area equal to the amount of area necessary to install the leaching system shall be kept available for future expansion and repair of the leaching system.
- OWTS are not allowed within the floodway or the 100-year floodplain, or on sites with slopes greater than 30% (except system repairs on slopes up to 50%).
- Soil suitability is determined based on the results of a percolation test, exploratory excavation soil logs, and soil structural and textural characteristics. Percolation rate alone does not determine soil suitability. Soil texture may determine soil suitability where percolation test results are unclear or non-representative.
- Sandy soils with fast percolation rates require use of enhanced treatment systems.
- Trenches must be placed in areas where the soil has not been removed, altered, or filled.
- Leaching systems are prohibited in areas containing fill.

Minimum separation requirements to seasonally high groundwater and related minimum horizontal distances to water features and wells are as follows (Santa Cruz County 2004):

- Standard systems: If minimum horizontal distance to a well, stream, spring, or other waterbody is 101–250 feet, 5–50 feet of continuous unsaturated soil to seasonal high groundwater is required depending on the percolation rate. If minimum horizontal distance to a well, stream, spring, or other waterbody is greater than 250 feet, 5–8 feet of continuous unsaturated soil to seasonal high groundwater is required depending on the percolation rate.

- Enhanced treatment systems: If minimum horizontal distance to a well, stream, spring, or other waterbody is 25–50 feet, 5 feet of continuous unsaturated soil below the dispersal system to seasonal high groundwater is required. If minimum horizontal distance to a well, stream, spring, or other waterbody is 51–100 feet, 3 feet of continuous unsaturated soil to seasonal high groundwater is required. If minimum horizontal distance to a well, stream, spring, or other waterbody is 101–250 feet or greater, 1 foot of continuous unsaturated soil to seasonal high groundwater is required.

Additional criteria address minimum separation requirements to impermeable soils. For new systems, these criteria are summarized as follows (Santa Cruz County 2004):

- At least 10 feet of permeable soil is required below the leaching device.
    - For the first 3 feet below the trench, 60 mpi is the minimum acceptable percolation rate.
    - For the next 3–10 feet below the trench, 120 mpi is the minimum acceptable percolation rate.

For standard systems requiring repairs, these criteria must be satisfied (Santa Cruz County 2004):

- If a stream, spring, or cut bank is within 50 feet, 5 feet of permeable soil below the leaching device, 1–120 mpi percolation rate.

- If a stream, spring, or cut bank is more than 50 feet away, 3 feet of permeable soil below the leaching device, 1–120 mpi percolation rate.

Additional constraints and other guidance on siting and management of septic systems in the County are contained in documents that are focused on the San Lorenzo River Watershed, which has been subject to stringent septic regulations related to elevated levels of bacteria and nitrate as a result of historically poor septic system conditions. In response to a regional water board prohibition on all new OWTS, Santa Cruz County developed specific restrictions for septic systems in the San Lorenzo River Watershed, which are addressed by the County in the *Wastewater Management Plan for the San Lorenzo River Watershed* (Santa Cruz County 1995a). A companion document, the *San Lorenzo Nitrate Management Plan*, was prepared and adopted at the same time (Santa Cruz County 1995b). Information from the Nitrate Management Plan that relates to use of septic systems in the watershed is essentially the same as that contained in the Wastewater Management Plan. Concurrent with adoption of the Wastewater Management Plan by Santa Cruz County, the regional water board lifted the prohibition with the condition that Santa Cruz County continues implementation of the plan.

The effort to improve conditions within the San Lorenzo River Watershed involved the planned inspection of approximately 12,900 developed parcels to identify malfunctioning wastewater disposal systems (Santa Cruz County 1995a). Problem systems were defined as those with surfacing effluent, discharge of greywater, or that were contributing to groundwater degradation, as indicated by water quality sampling. All malfunctioning systems were subject to mandatory upgrades in conformance with specific repair requirements. Repair standards were applied to various types of systems, including standard systems, alternative technology systems, nonconforming systems, and haulaway systems. Upgrades were required under failure conditions or when the property owner pursued plans for a major remodel. An ongoing inspection schedule of certain types of systems

was planned to occur every 1, 2, or 3 years, depending on individual site and system conditions. A service agreement providing for at least annual inspection and maintenance by an approved on-site system service provider is required for all enhanced treatment systems (Ricker, pers. comm., 2007). Ongoing inspection of other systems was planned to occur every 6 years. Feasibility studies were planned to assess alternatives for community wastewater disposal systems for areas that were otherwise unsuitable for standard on-site disposal methods. Certain conditions were applied (and are still in effect) to new development within the San Lorenzo River Watershed (and other water supply watersheds) (in addition to the 1 acre minimum lot size requirement):

- Shallow effluent discharge depth (less than 4 feet in sandy soils and 4–6.5 feet in other soils).
- Additional measures for 50% nitrogen reduction in areas with highly permeable sandy soils.
- System upgrade to meet the requirements for a standard or alternative system for any major remodel or bedroom addition.
- New development could be accommodated in commercial town areas with community wastewater disposal systems.

The Nitrate Management Plan addresses nitrogen control measures, including land use regulations, as follows:

- Require 10 acre minimum lot sizes for new land divisions, as well as other protective measures for groundwater recharge areas.
- Maintain regulations that protect riparian corridors, control erosion, and limit or restrict land clearing.
- Do not approve new land use projects that would increase discharge of nitrate to groundwater or surface water by more than 15 pounds per acre per year.

The County prepared a draft update to the Watershed Management Plan in 2001, which reported improvements in bacteria and nitrate levels in the San Lorenzo River Watershed (Santa Cruz County 2001). Although the County made (and continues to make) progress in addressing water quality issues within the watershed, the San Lorenzo River continues to be listed as an impaired surface water (as defined in Section 303[d] of the CWA). Based on ongoing monitoring and testing results, county staff is considering submittal of a request for delisting to the State Water Board (Ricker, pers. comm., 2007). The draft update to the Watershed Management Plan recommended continued implementation of the 1995 plans—the *Wastewater Management Plan for the San Lorenzo River Watershed* and the *San Lorenzo Nitrate Management Plan*.

The County prepares periodic status reports on the San Lorenzo Wastewater Management Plan, and the most recent is for years 2002–2004 for sections regarding nitrate management (Ricker, pers. comm., 2006). The 2002–2004 status report outlines the status of ongoing nitrate management measures from the related management plans and documents continued reductions in nitrate levels based on the results of monitoring and data collection in the watershed.

Riverside County

Riverside County is within the boundaries of three regional water boards—Santa Ana (Region 8), San Diego (Region 9), and Colorado River Basin (Region 7). The western half of the county, where the county's population is concentrated, lies mostly within Region 8, with a smaller portion within Region 9. Most of the more rural eastern half of the county area is within the boundaries of Region 7. The authority for oversight and regulation of septic systems in the County is shared between the county and the three regional water boards (Martinez, pers. comm., 2007). An MOU between Riverside County and the Santa Ana Regional Water Board allows the Riverside County Department of Environmental Health to permit the installation of OWTS within the part of the county that lies within the Region 8 area. No formal agreements for OWTS management exist between the

County and either the San Diego or the Colorado River Basin Regional Water Boards. Direct communication between the landowner and the applicable regional water board and/or between the County and the applicable regional water board provides a way to address issues and resolve questions (Martinez, pers. comm., 2007). The County is required to comply with the minimum standards contained in the applicable Basin Plans.

The Department regulates the installation and management of septic systems in the county based on the provisions of its Ordinance No. 650.5, which regulates the discharge of sewage in the unincorporated part of the county. (Ordinance 650.5 is available for review online: http://www.clerkoftheboard.co.riverside.ca.us/ords.htm.) Additional guidance for evaluation of site conditions and installation of OWTS is contained in the County's "engineering blue book," titled *Waste Disposal for Individual Homes, Commercial and Industrial* (Riverside County 1981).

Ordinance 650.5, as amended on May 16, 2006, was revised based on the regulatory requirements that have been anticipated from the State Water Board. An earlier draft version of the ordinance had also been submitted for review to the applicable regional water boards and the California On-site Wastewater Association (Dellenbach, pers. comm., 2006). Ordinance No. 650.5 took effect in June, 2006. Assuming adoption of the proposed statewide regulations by the State Water Board, the ordinance may be amended again to assure consistency or to avoid potential conflicts with the State Water Board's regulations (Martirez, pers. comm., 2006).

Installation of an on-site system in the county is subject to written approval by the Director of the Riverside County Department of Environmental Health (Director). Site conditions may vary from one parcel to another; therefore, the County does not rely on area maps to determine suitability of a site for installation of OWTS. Typical site constraints listed for Riverside County for installation of on-site systems include depth to seasonal groundwater, soil conditions, slope, and lot size. Ordinance No. 650.5 defines a conventional septic system as an OWTS that consists of a septic tank and a subsurface gravity dispersal system that has been approved by the Department. An alternative system is defined as any OWTS that does not meet the criteria of a conventional OWTS, but that is allowed under conditions specified by the Department.

Section 3 of Ordinance No. 650.5 addresses general requirements, and specifies that conventional OWTS dispersal systems shall have at least 5 feet of continuous soil below the bottom of the dispersal system and above the seasonal high groundwater level, and 8 feet of soil to fractured/weathered bedrock at all times. Approval of an OWTS shall require preparation of detailed plan review, pre-site, and construction inspections; and installation shall be performed by a "qualified service provider" in a manner that is consistent with the approved plan design. (As defined in Ordinance No. 650.5, a qualified service provider is a state licensed contractor with knowledge and competency in OWTS design, construction, operation, maintenance and monitoring through experience and/or education. Effective January 1, 2007, and thereafter a qualified service provider must meet certification requirements as established by the Director.) In the event that on-site conditions prevent the installation or function of the OWTS as designed, a revised design plan must be submitted to and approved by the Department prior to installation. All OWTS shall require a construction inspection and final approval by either the Department of Environmental Health or the Department of Building and Safety prior to use.

Section 5 of Ordinance No. 650.5 addresses operating permits. All new or repaired alternative OWTS shall be subject to an annual operating permit, and any OWTS subject to this section must be inspected yearly and pumped at least once every 5 years. Alternative OWTS with advanced treatment shall include evidence of a current maintenance agreement with the manufacturer or other qualified service provider and copies of that company's evaluation/inspections of the OWTS. The agreement shall include evaluations by the service provider of a frequency no less than once every 3 months, with direct visual inspection at a frequency of no less than once every 6 months.

Ordinance No. 650.5 defines OWTS failure as a condition of an OWTS that threatens public health or water quality by creating a potential for direct or indirect contact between sewage and the public. Examples of failure include the following:

- Sewage leaking to ground surface or groundwater;
- Sewage backing up into a structure caused by slow OWTS soil absorption of septic tank effluent;
- Inadequately treated sewage causing pollution of groundwater or surface water; and/or
- Noncompliance with standards stipulated in the permit issued for the OWTS based upon the protection of human health, water quality and the environment.

Section 7 of Ordinance No. 650.5 addresses OWTS failure, and states that in the event an OWTS is determined to be in failure by the Director, an order shall be given to abate the failure. The requirements for abatement will vary depending on the conditions present at the site where the failure has occurred.

The County also relies on design guidelines for mound systems from the State Water Board (1980), which specifies a minimum 2-foot depth to seasonal groundwater from the ground surface. A minimum depth of 3 feet is specified from the ground surface to an impermeable layer. Minimum depth may be increased depending on soil conditions. Site slope for mound systems may not exceed 12%.

The County's "engineering blue book" (Riverside County 1981) addresses preparation of a sewage disposal feasibility report, procedures for percolation testing and boring requirements, and design requirements. A sewage disposal feasibility report is required: (1) on all land subdivisions, (2) on any parcel division where current data will not allow the County to set a sewage disposal rate, and (3) on any single lot where usable area or soil conditions are critical. Requirements for percolation tests are specified for leach lines and for seepage pits. No OWTS shall be allowed in areas where the high water table is less than 10 feet below the existing ground surface except in some areas in the Coachella Valley. Minimum horizontal distances between OWTS components and wells or water features are as follows:

- 50 feet between a water supply well and a septic tank.
- 100 feet between a water supply well and a disposal field.
- 150 feet between a water supply well and a seepage pit.
- 50 feet between a stream and a septic tank or disposal field.
- 100 feet between a stream and a seepage pit.

As discussed previously, the Santa Ana Regional Water Board established a one-half acre minimum lot size requirement for new developments using OWTS. This requirement applies to the western half of Riverside County, where the population is concentrated. Hilly or mountainous terrain surrounds much of the urbanized lowland areas in the county. Implementation of septic systems on slopes that are 30% or greater would require grading and removal of alluvial soils, which could result in site conditions that would be prohibitive to installation of a system on a particular site. The County provides for a minimum 100-foot setback for septic tanks or subsurface sewage leach lines or leachfields from most water wells, in accordance with the requirements of Ordinance No. 682.3 that regulates the construction, reconstruction, abandonment, and destruction of wells. According to county staff, OWTS may only be installed in native undisturbed soil (i.e., the county does not allow placement of systems in areas containing fill, engineered or otherwise (Haraksin, pers. comm., 2007).

County staff estimates that the County has permitted the installation or replacement of 4,000 to 6,000 on-site septic systems annually over the past 10 years (Dellenbach, pers. comm., 2006). The total number of systems in the county is unknown; however, based on historical growth patterns, it is known that the highest concentration of on-site systems is within the heavily populated western half of the county. The Cherry Valley community, which is located north of the City of Beaumont in western Riverside County, has recently been the subject of a study by the Timeteo Watershed Management Authority, which concluded that elevated nitrate levels in groundwater was related to OWTS in use in the Cherry Valley area. Because of concerns that continued water quality degradation could impact groundwater quality for the entire Beaumont Basin, the Riverside County Board of Supervisors approved Ordinance No. 864 on November, 16, 2006, to establish a 90-day moratorium on the acceptance of

applications for new septic systems in the Cherry Valley Community of Interest (CVCOI) unless the OWTS is designed to remove at least 50% of the nitrogen released in the effluent. Ordinance No. 864 requires County staff to coordinate further study and review of Cherry Valley groundwater issues with the Santa Ana Regional Water Quality Control Board and to investigate establishment of a Septic Tank Maintenance District for the CVCOI.

County staff estimates that a total of approximately 75 alternative wastewater treatment systems (mostly sand mound systems) have been installed in the county. Also, it is estimated that approximately one-third of existing homes in unincorporated areas of the county are served by septic systems.

Sonoma County

Based on information presented in the Draft EIR for GP 2020, most residences and some small educational, public, commercial, and industrial facilities in unincorporated areas of Sonoma County rely on OWTS (Sonoma County 2006). It is estimated that the county has a total of 35,000–40,000 septic systems. The Sonoma County Permit and Resource Management Department (PRMD) is responsible for permitting individual OWTS and some community OWTS. Of the total number of septic systems, an estimated 2,500 have annual renewable operating permits. The County issues approximately 450–500 septic permits annually for various types of systems and installations (Leach, pers. comm., 2006). Sonoma County is within the boundaries of two regional water boards—North Coast (Region 1) and San Francisco Bay (Region 2). These two regional water boards have conditionally waived oversight and regulation of septic systems in the County through MOUs with the Sonoma County PRMD (Leach, pers. comm., 2006). The County is required to comply with the minimum standards contained in the applicable Basin Plans. The County grants permits for individual OWTS provided that all relevant conditions and/or regulatory requirements are met. Larger systems, including some commercial and industrial systems, are also subject to review and approval by the regional water board (Sonoma County 2006).

The basic permitting requirements for discharge of sewage in the unincorporated part of the county are addressed in Article II of Chapter 24, "Sewers and Sewage Disposal," of the Sonoma County code. (Chapter 24 of the Sonoma County Code is available for review online at: http://municipalcodes.lexisnexis.com/codes/sonomaco/) The County requires submission of an application with sufficient detail to show that the system will not adversely affect groundwater or surface waters, or public health, and that no significant effect on the environment will occur. The director is authorized to determine what constitutes an adverse effect. Provided that all requirements are satisfied, an operational permit for an individual OWTS may be issued by the director of the Sonoma County PRMD for a period of 1, 2, or 3 years. Article II further provides for the director to issue regulations governing application of these criteria to nonstandard systems.

For new developments that are not served by a public water system, the County does not allow septic systems on lots smaller than 1½ acres. A minimum lot size of 1 acre is allowable for new developments that are served by a public water system. All applications are subject to approval by the County prior to issuance of an operating permit (Edison, pers. comm., 2006).

The well and septic division of the Sonoma County PRMD maintains various informational handouts, forms, and applications to provide property owners with permitting assistance and other information necessary to satisfy clearance requirements for wells and septic systems. Form No. WLS-008 addresses septic system application requirements. Prior to submittal of an application for a septic system installation, the property owner must arrange for a "pre-perc evaluation," a soils test, and a percolation test, which must be performed by a septic consultant and confirmed by PRMD staff. (Pre-perc evaluation is essentially a study of a site conducted with a Registered Environmental Health Specialist [REHS] and a septic consultant to determine site suitability for a septic system. A backhoe or excavator with an operator must be present during the pre-perc evaluation. The type of percolation test required will be determined at the time of the pre-perc evaluation.) A groundwater determination may be required, and this test is generally conducted under wet-weather conditions (i.e., beginning January 1 and continuing into March or April). This and other related information is available online at the County's Web site: http://www.sonoma-county.org/prmd/docs/handouts/ws.htm.

Form No. WLS-008 from the County's Web site specifies setback requirements. Minimum specified horizontal distances include the following:

- 100 feet between either a leaching trench or a non-standard OWTS and a water supply well, a perennial stream, or a lake, reservoir, or the ocean.
- 50 feet between either a leaching trench or a non-standard OWTS and a drainage course or ephemeral stream.
- 50 feet between a septic tank and a water supply well, a perennial stream, or a lake, reservoir, or the ocean.
- 25 feet between a septic tank and a drainageway or ephemeral stream.

The Sonoma County PRMD has established a series of "policies and procedures" that provide guidance related to building and development in the county. The policies and procedures that are numbered 9-2-1–9-2-30 address many aspects of sewage disposal in the unincorporated parts of the county, which are available online at the County's Web site: http://www.sonoma-county.org/prmd/docs/policies/index.htm. The legal authority for these policies and procedures varies, but generally includes the California Plumbing Code, California Building Code, County Code, Uniform Plumbing Code, and the California Health and Safety Code. Policy No. 9-2-8 addresses non-standard OWTS in detail, and the authority for its implementation has been conditionally waived by the two regional water boards through MOUs with the Sonoma County PRMD. A partial list of guidelines covered by these policies and procedures are summarized as follows:

- **No. 9-2-2:** A qualified consultant (i.e., a REHS or a Registered Civil Engineer [RCE]) is required for the design of OWTS for any new systems that will serve multiple dwellings or other larger developments.
- **No. 9-2-4:** Acquisition of easements on adjacent properties may be sufficient to allow installation of OWTS to serve properties that may not meet minimum standards for a system.
- **No. 9-2-5:** Establishes procedures and standards for the permitting and installation of filled land systems to be followed by County staff who review plans prepared by qualified consultants. Parameters are specified for testing to determine groundwater levels and soil formations. Generally, percolation rates of 60 mpi are required. Leaching trenches require a minimum depth of 36 inches in pervious native soil, or a combination of at least 24 inches of pervious native soil plus sufficient pervious fill material to achieve a total depth of 36 inches. Sand, gravel, or rock do not qualify as acceptable material for filled-land areas, which must be constructed in not more than 8-inch layers to the same dry density as the native soil. Soil density testing may be required. Filled land systems are limited to areas not exceeding slopes greater than 20%. The area filled must equal 200% of the area required for the leachfield. An additional expansion area of 100% of the area required for the leachfield must also be reserved.
- **No. 9-2-6:** Establishes requirements for pump systems and the sizing requirements for pump systems for standard septic systems, which are based on guidelines and regulations for non-standard systems.
- **No. 9-2-8:** Establishes regulations for the design, construction, repair, and operation of non-standard sewage disposal systems, including experimental and alternative systems. Systems are generally subject to annual inspections by PRMD staff. Non-standard systems are not approved for use in a sewer hookup area, a septic tank ban area, or a "waiver prohibition area." (Refer to the previous section, "Waste Discharge Requirements and Waivers," for further discussion of waivers.) Non-standard systems are prohibited in areas that have been filled, excavated, ripped or plowed, altered, or otherwise modified. They are also prohibited in areas that are subject to flooding, geological instability, or drainage problems. Variances may be granted for systems that require repair. A minimum 100-foot setback from water wells is required. Property owners must submit biannual monitoring forms to PRMD. All non-standard systems must be designed with a series of monitoring wells to sample for potential subsurface groundwater degradation. Depending on the type of system and the date of lot creation, a reserve area of either 100% or 200% is required. The minimum depth to groundwater,

fractured rock, impermeable soils, and consolidated bedrock is generally 24 inches. Certain types of systems may require a greater separation. The minimum criterion for percolation tests is generally 1–120 mpi. Additional detail on design criteria for various types of non-standard systems is provided under Policy No. 9-2-8 at the County's Web site.

- **No. 9-2-12:** Provides guidelines to follow for classifying existing septic systems prior to determining the allowable extent of a remodel, addition, or other structural alteration project. The percentage of improvements for the scope of work of a proposed remodel and/or addition will be determined by PRMD staff. This policy is intended to expand on the provisions of Policy No. 9-2-15, "Policy for Reutilization of Existing On-site Sewage Disposal System."

- **No. 9-2-13:** Establishes procedures and requirements for repair of systems when full compliance with current code requirements may be impossible. A 50-foot setback from on-site wells must be maintained. A 100-foot setback between the repair area and a well on a neighboring property is required, or it must be located no closer to a neighboring well than the existing system, but in no case may the distance be less than 50 feet. Other setback requirements are: 25 feet from ephemeral streams; 50 feet from perennial streams, lakes, or ponds; and 25 feet from cut banks. Leachfields are generally sized based on soils morphology. The proposed trench depth or system location may not present a greater potential hazard to groundwater than presently exists on the property. Mitigation may be required if an impermeable soil horizon exists within 3 feet below the proposed trench bottom. Under certain conditions, repaired systems must be designed by either a REHS or a RCE. Seepage pits may be allowed under certain conditions.

- **No. 9-2-17:** Provides uniform standards and detailed methodologies for review of site and soil conditions, and performance of percolation testing.

- **No. 9-2-18:** Addresses determination of site suitability and design criteria for installation of leach lines at shallow depths to provide adequate and safe disposal of septic effluent.

- **Nos. 9-2-21–9-2-27:** Address prohibitions and other restrictions on OWTS for approximately ten subdivisions or communities in the county where water quality problems have been associated with older and inadequate septic systems. Several waiver prohibition areas are identified. In some areas, water quality problems are severe, and the soil conditions will not support septic system upgrades under current environmental health standards.

- **No. 9-2-29:** Provides guidelines for the consistent determination of percentage of improvements on building permits with plans. This policy became effective on July 1, 2006, and it is used in conjunction with Policy No. 9-2-12.

Inyo County

The Lahontan Regional Water Board has conditionally waived the oversight and regulation of septic systems in the County through an MOU with the Inyo County Environmental Health Services Department. The County determines suitability of a site for a conventional or engineered wastewater treatment system based on submittal of adequate documentation by the applicant and on the results of on-site trenching and percolation tests (Moskowitz, pers. comm., 2006). The County relies on guidance and standards contained in the Basin Plan for the Lahontan Regional Water Board (1995), the U.S. Environmental Protection Agency (EPA) On-site Wastewater Treatment Systems Manual (EPA 2002), and the Uniform Plumbing Code. (The Basin Plan for the Lahontan Regional Water Board is discussed above.)

The Inyo County Code includes Chapter 7.12, which addresses the discharge of sewage in the county. Section 7.12.020 includes the following statement: "Before any facilities for the discharge of sewage shall be constructed in this county the person intending such construction shall obtain approval of the county health officer of all plans and specifications whereby such sewage is to be discharged." Section 7.12.050 states that: "The county health

officer shall notify the Water Pollution Control Board of the state, Lahonton Region Number Six of every facility for the discharge of sewage hereafter constructed in this county and shall also notify the county assessor of such construction." The complete text of Chapter 7.12 of the Inyo County Code is available online at http://www.qcode.us/codes/inyocounty/. No specific standards for OWTS are included in the Inyo County Code. County staff estimates that the County permits the installation or replacement of approximately 25 OWTS annually (Moskowitz, pers. comm., 2006).

According to the Inyo County General Plan (2001), over 50 small communities are located in the county; most of these communities are located near Highway 395, which runs through the Owens Valley near the west side of the county. Other small communities are located near highways leading to and through Death Valley and in the southeast corner of the county. The City of Bishop and the larger communities of Independence (County seat) and Lone Pine are on centralized sewer systems, except for the outlying areas of these communities, which rely on septic systems. Some of the smaller communities use community septic systems, and many rely on individual septic systems. Communities that rely on individual septic systems generally vary from two to 60 housing units per community (Inyo County 2001). Many of these communities also rely on individual or community water wells for potable water. The General Plan documents a historical problem of localized groundwater pollution related to the use of individual septic systems on small parcels in one small community near the City of Bishop. The Lahontan Regional Water Board has applied waste discharge prohibitions on the discharge of waste from new leaching and percolation systems in areas within its South Basin, including areas within the Owens Valley Hydrologic Unit in and near Bishop and the Rocking K, Aspendell, and Mountain View Estates subdivisions.

In the 1970s, testing of certain drinking water wells in the Mustang Mesa subdivision by the Inyo County Health Department showed contamination with fecal coliform bacteria. The Lahontan Regional Water Board subsequently adopted Basin Plan amendments to prohibit discharges from leaching and percolation systems in the area. Changes in design of on-site disposal systems and monitoring practices followed, and the Basin Plan prohibitions were rescinded. In 1978, the Mesa Community Services District was formed to serve as a public entity with the authority to provide wastewater disposal for property owners in the Mustang Mesa, Mesa Vista, and Alta Vista subdivisions near Bishop. In August 1993, the Lahontan Regional Water Board adopted an MOU with Inyo County and the Mesa Community Services District (CSD) to implement the Mustang Mesa Wastewater Management Plan, which includes alternative septic system designs, well requirements, enforcement procedures, and monitoring and maintenance programs. Inyo County continues regulation of the Mesa CSD through site inspections and monitoring (Lahontan Regional Water Board 1995).

Town of Paradise

As discussed previously, the total population in the Town of Paradise in 2005 was estimated at 26,500 persons. The Town has more than 11,000 on-site septic systems, and it is one of the largest unsewered incorporated towns in the U.S. In 1992, the Town exercised its authority as a public agency to form an "on-site wastewater disposal zone," in accordance with provisions of the California Health and Safety Code (Section 6950 et seq.) (Danz, pers. comm., 2007). With approval of the Central Valley Regional Water Board (Region 5), the on-site wastewater disposal zone has the authority to:

- Collect, treat, reclaim, or dispose of wastewater without use of a communitywide sewer system provided that water quality degradation does not occur inside or outside of the zone.
- Acquire, design, own, construct, install, operate, monitor, inspect, and maintain OWTS within the zone in a way that prevents the pollution, waste, and contamination of water, and to abate nuisances.
- Conduct investigations and analyses and monitor conditions regarding water quality within the zone.
- Adopt and enforce reasonable rules and regulations necessary to implement the purposes of the zone (Health and Safety Code Section 6976).

Wastewater treatment and disposal in the Town of Paradise is subject to approval by the Town Health Officer, who is authorized to implement the wastewater management program in Paradise. Local regulatory guidance related to the permitting, installation, and management of OWTS in Paradise is contained both in its *Manual for the On-site Treatment of Wastewater* and in Chapter 13.04 of the Town's municipal code, as described below.

Paradise prepared its *Manual for the On-site Treatment of Wastewater* (Town of Paradise 1992), which addresses specific regulatory guidance for construction and repair of standard and advanced and alternative OWTS on both existing and new parcels (Danz, pers. comm., 2007). The Town's wastewater management program was initiated following voter rejection of a measure that would have created a centralized sewerage system in the Town's commercial area. As part of the management program for the on-site wastewater disposal zone, the Town began to evaluate existing OWTS in 1993, with a goal of completing these initial evaluations within 5 years. Town staff estimates that most if not all of the existing systems were evaluated by certified personnel and that operating permits for OWTS were issued for periods of at least 1 year. Most operating permits issued were for periods of 1, 2, 5, or 7 years (Danz, pers., comm., 2007). Following those across-the-board assessments, many OWTS have been subject to re-evaluation based on the operating permit period or as a result of property sales or identified performance issues. Ongoing surface and groundwater monitoring is a key part of the review process that includes regular testing of large commercial systems located throughout the community for various potential surface and groundwater contaminants. The *Manual for the On-site Treatment of Wastewater* is generally divided into two major sections—Part A addresses permitting procedures and policies and Part B is a guide for the selection of appropriate on-site systems (including standard and alternative systems) based on soil types and site conditions. Systems are evaluated and maintained by contractors who must be licensed and certified by the Town prior to conducting business within the on-site wastewater disposal zone.

A partial list of criteria related to permitting, siting, and management of OWTS from the *Manual for the On-site Treatment of Wastewater* is summarized as follows:

- Site evaluations may be conducted by either qualified on-site wastewater disposal system designers or authorized personnel from the Town of Paradise. The detailed site evaluation report is subject to approval by the Town. Direct supervision by a registered civil engineer, certified professional soil scientist, certified engineering geologist or registered geologist, or registered environmental health specialist is required. Groundwater level monitoring during the wet season may be required as part of the site evaluation process. Town approval of a site evaluation report is required for the issuance of a construction permit.

- Single-family residential lots created after November 27, 1979, may be considered to be approved with respect to soils and percolation data if these criteria are met:

    - The parcel is located in an area identified as having Aiken Very Deep soils and the ground slope does not exceed 30%, based on the general soil map on file with the Town.

    - The parcel is not located in an area known to have problematic soil conditions (e.g., high water table, perched water, or a percolation rate that is greater than 60 mpi).

- Site evaluation reports must include descriptions of a minimum of two soil profiles taken from soil test pits. Where soil permeability is in question, a soil percolation test is required.

- Upon completion of construction, alteration, or repair of an OWTS, the installer must provide the Town with a detailed, as-built plan.

- Operating permits for standard OWTS are renewable when systems are inspected by personnel who are approved/certified by the Town. Inspections are required under these circumstances:

    - When a septic tank is pumped at a time that is not a condition of an existing operating permit.

- When the property is sold and the property owner does not have a current operating permit.
- When a complaint is filed with the Town.
- At a time interval that is based on the approximate known wastewater capacity and the most current evaluation report.
- Under any other conditions that the On-site Sanitary Official considers appropriate.

- Operating permits for alternative and innovative pre-treatment systems are renewed annually, and quarterly report submittals must be in compliance with current reporting requirements.
- Applicable permit requirements may be waived for emergency repairs, which are required for an OWTS where wastewater is backing up into a dwelling or commercial facility, or where a broken pressure sewer pipe could endanger public health and human safety.
- Siting criteria that are specified in the manual apply only to the repair of existing systems and the construction of new systems on existing lots, and not to subdivisions or lot splits.
- The type of OWTS installed on a parcel is generally determined based on expected soil characteristics and site conditions. Various types of well-drained, permeable soils are considered suitable for standard or alternative system types. In any case, a site evaluation is required to verify expected conditions, which would almost always require a high groundwater level determination in wet weather conditions (Danz, pers. comm., 2007). Slopes greater than 45% are considered unsuitable for any type of OWTS.
- For standard and pretreatment systems, the permanent and temporary water tables may not be less than 48 inches and 24 inches, respectively, from the bottom of the absorption trench[4]. In practice, a 24-inch separation is considered inadequate; moreover, approval of any proposal for installation of an OWTS with 2.0–3.75 feet of separation to groundwater would be granted conditionally (Danz, pers. comm., 2007). Maximum depth of trenches below the natural soil surface is 48 inches. For standard and pretreatment systems, ground slope may not exceed 30% and 45%, respectively.
- Steep slope systems (a type of alternative system) may be allowed on slopes up to 45%. A minimum soil depth of 6 feet is required, with no evidence of saturation to a depth of 8 feet.
- Fill thicker than 12 inches and used for an absorption facility is considered engineered fill, which is generally used to provide the minimum required effective soil depth in areas of high groundwater or over a restrictive layer. Engineered fill is subject to examination and approval by the On-site Sanitary Official. The texture of the fill material must be the same as the native soil or one textural class coarser. The first 6 inches of the engineered fill must be mixed with the native soil.
- Electrical components used for OWTS must comply with several requirements, including one specifying that an audible and visual alarm with manual silence switch be located in or near the building served by the pump.
- Large OWTS (e.g., community systems or those that serve commercial establishments) refers to systems with hydraulic loading rates of 900 gallons per acre per day up to 2,000 gallons per acre per day, and septic tank/absorption field treatment and disposal systems having a treatment and disposal capacity of 1,000 gallons per day or more. A groundwater monitoring program is required for each disposal area.

[4] A temporary water table is expected to be present when approximately half of the average annual rain has fallen; this condition may persist continuously for approximately 3 months during the year.

Chapter 13.04, "Sewage Disposal," of the Town's municipal code covers the permitting and operating requirements for disposal of sewage in the Town of Paradise for parcels or lots created after July 7, 1992 (i.e., the adoption date of Ordinance No. 219, which resulted in the repeal and replacement of Chapter 13.04 of the Paradise Municipal Code). Chapter 13.04 establishes parameters for creation of new parcels (e.g., guidance for determining net lot usable area and design flows for OWTS), characterizes the "OWTS Evaluation Program," and specifies who may design and inspect systems in the Town (Danz, pers. comm., 2007). The Paradise Municipal Code is available online at http://www.townofparadise.com/code_enforcement.html. The general provisions in Chapter 13.04 specify that all developments requiring a sewage disposal system, or an alteration, enlargement, or repair of an existing system, must submit plans to the on-site sanitary official. Issuance of a sewage disposal permit is required prior to the issuance of a building permit. A detailed plot plan is required for processing of the permit application. The on-site sanitary official may also require depth to water table testing, soil mantle depth determination, and soil percolation test data. Special design systems require submittal of detailed engineering plans.

Other specifications in the ordinance include the following:

- Soil depth below the bottom of the leaching trench shall not be less than 4 feet.
- Depth to groundwater below the bottom of the leaching trench shall not be less than 4 feet.
- A 100% replacement area must be available.
- No sewage disposal system subject to the sewage disposal ordinance may be covered with earth and put into use before it has been inspected by the on-site sanitary official and until the operating permit has been issued.
- No person may transfer title of any land parcel with an OWTS to another person without first providing evidence that the system is in substantial compliance with the provisions of Chapter 13.04 of the Paradise Municipal Code (i.e., a legally valid operating permit of record or evidence of a current evaluation of the OWTS performed by a qualified person).
- Special design systems must be located, designed, and installed under the direction of a registered civil engineering geologist or registered sanitarian.
- Minimum net lot area for special design systems increases from approximately 0.47 acre to up to 10 acres depending on the percolation rate, the minimum soil depth to seasonal high groundwater or an impermeable layer, and the slope (Table 13.04.110 in Chapter 13.04 of the Paradise Municipal Code).
- Minimum net lot area for conventional systems increases from approximately 0.33 acre to up to 1.76 acres depending on the percolation rate and the slope (Table 13.04.110 in Chapter 13.04 of the Paradise Municipal Code).
- Areas with less than 2 feet of soil, slopes greater than 30%, or percolation values greater than 120 mpi are considered unsuitable for meeting net lot area requirements.
- Alteration, repair, relocation, or replacement of any OWTS requires a construction permit from the on-site sanitary official.
- Operation of any private OWTS requires an operating permit from the on-site sanitary official.
- It is unlawful for operation of any OWTS to result in: (1) sewage overflowing onto any lands; (2) sewage emptying, flowing, seeping, or draining into any stream, spring, river, lake or other waters within the Town; or (3) sewage being accessible to rodents, insects, or humans.

- If the on-site sanitary official determines that an OWTS is discharging in violation of the Town's standards, a corrective notice is mailed to the owner of the lot or parcel where the failed OWTS is located. When surfacing effluent is present, the owner has 30 days from the mailing date of the corrective notice to complete repairs. If the failure or violation is not posing an immediate threat to public health and safety, the owner has up to 90 days to complete repairs.

From Chapter 13.04, minimum horizontal distances between OWTS components and wells or water features are as follows:

- 50 feet between a private well and a septic tank. 100 feet between a private or public water well and a leaching trench. 100 feet between a public water well and a septic tank. 100 feet between a public water well and a septic tank.

- Minimum distances between a perennial stream, irrigation ditch or other perennial watercourse and a septic tank or leaching trench are 50 feet and 100 feet, respectively.

- 50 feet between a ravine, drainageway, or ephemeral stream and a septic tank or leaching trench.

4.3.2 ANALYSIS OF ENVIRONMENTAL IMPACTS

This section analyzes the potential effects of the proposed statewide regulations on land use and planning.

THRESHOLDS OF SIGNIFICANCE

Thresholds for determining the significance of impacts related to land use and planning are based on relevant provisions of CEQA, the State CEQA Guidelines, checklist questions for land use and planning in Appendix G of the Guidelines, and professional standards and practices.

The proposed statewide regulations for OWTS would have a significant impact on land use and planning if it would:

- Physically divide an established community;

- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;

- Conflict with any applicable habitat conservation plan or natural community conservation plan.

The proposed statewide regulations would not result in the physical division of a community. Under current conditions, OWTS are installed within the boundaries of individual land parcels in areas throughout the state (Exhibit 4.3-1). These systems are part of the overall parcel development and do not present physical barriers that can divide communities. Implementation of the proposed statewide regulations would not result in any physical change that would cause an impact relating to the physical division of a community; therefore, this issue is not discussed further in this section.

APPROACH AND METHODS

This analysis of potential impacts to land use and planning from implementation of the proposed statewide regulations is based on these main analysis points:

- Development is controlled and guided at the local level through the respective adopted general plans and zoning ordinances of cities and counties throughout the state, and this analysis examines whether the proposed regulations would change local land use planning processes or establish new regulatory restrictions that could affect how local jurisdictions guide growth to protect sensitive resources and local environments.

- Activities in the State that affect water quality are regulated at the State level, and regional water boards share that regulatory responsibility with local governing bodies. This analysis evaluates whether the proposed regulations would undo the existing regulatory framework that addresses enforcement of water quality protection standards, guidelines, and regulations.

- Cities and counties implement policies, guidelines, and ordinances to manage on-site sewage disposal, and this analysis evaluates whether the proposed regulations would conflict with local regulations that have been adopted to avoid, minimize, or mitigate potential effects to the environment.

Section 7.2 , "Growth Inducement," addresses the potential for the proposed project to affect the location and intensity of growth on a statewide level.

IMPACTS OF THE PROPOSED PROJECT AND MITIGATION MEASURES

IMPACT 4.3-1 **Conflicts With Applicable Land Use Plans, Policies, or Regulations Adopted for the Purpose of Avoiding or Mitigating An Environmental Effect.** *Through State of California planning law, local jurisdictions retain the authority to enact policies, programs, and ordinances to regulate how and where development may occur in local communities throughout the State. Implementation of the statewide regulations would not diminish the ability of cities and counties to exercise their land use planning functions, in accordance with State planning law. CEQA requires government agencies to consider the environmental consequences of their actions before approving plans and policies or committing to a course of action on a project. Therefore, a local jurisdiction proposing to amend its sewage disposal ordinance in a way that could result in a direct or reasonably foreseeable indirect physical change in the environment would be required to evaluate the environmental effects of the proposed action, in accordance with the requirements of CEQA. The proposed statewide regulations would not change the regulatory framework that allows local governing bodies and regional water boards to share authority over land use decisions that could affect water quality in the State. Section 30001(a) of the proposed statewide regulations addresses how local agencies and regional water boards retain the option of adopting guidelines and standards for OWTS, so long as they are equally or more protective of the environment and public health than the proposed statewide regulations. This is consistent with the mandate established by Section 13002 of the State Water Code. Based on the case studies presented in this analysis, situations could occur where a particular siting criterion for OWTS under the proposed regulations would be more protective of the environment than a corresponding or similar criterion currently in effect in a city or county to regulate on-site disposal of sewage; however, the resulting conflict would not result in a significant impact to the environment. Implementation of the proposed statewide regulations would result in no new significant effects on the environment compared to existing conditions in local areas or regions that are presently subject to local OWTS regulations. This impact is considered* ***less than significant****.*

As described above under, "Applicability of State Laws to Local Planning Processes," land use planning functions are retained by local jurisdictions through State of California planning laws. Of those laws that provide the basis for local jurisdictions to govern development within communities, the general plan (Government Code Section 65300 et seq.) and state zoning law (Government Code Section 65800 et seq.) are of primary use to cities and counties working to direct the type, location, and intensity of growth in an area or region. The proposed statewide regulations for management of OWTS would not affect the authority or purpose of State planning law. Nor would they affect the land use planning processes of local governing bodies that are undertaken in accordance with State planning law. For any local municipality, either one with more restrictive or less restrictive standards for siting of

individual OWTS, the proposed statewide regulations would not enable development to occur in places other than where it is allowed by the local governing body in communities throughout the State.

The local municipalities that were selected as case studies for this analysis—Santa Cruz County, Riverside County, Sonoma County, Inyo County, and the Town of Paradise—represent a range of conditions in the state where OWTS are permitted, installed, repaired, and replaced. The respective general plans for each of these communities include goals, policies, and objectives that address density of development, siting of septic systems, and limiting development to protect sensitive resources (e.g., water quality, rural and agricultural lands, and soils). Each of these municipalities has adopted a sewage disposal ordinance for the installation and management of OWTS, which must be consistent with its adopted general plan, and in accordance with the body of planning case law establishing that any action, program, or project undertaken by a city or county affecting land use and development must be consistent with the general plan. The proposed statewide regulations would not weaken this regulatory framework, nor would their implementation result in the imposition of any new regulatory process. To the extent that local regulations for management of OWTS are at least as restrictive as the proposed statewide regulations, no change would occur.

Through MOUs or other agreements with the regional water board, local governing bodies throughout the state use their authority to implement and enforce regulations for permitting, installation, and management of OWTS to protect water quality and public health. Comments provided during the public scoping period for the proposed project suggested that a local jurisdiction with a more restrictive standard for siting of OWTS (e.g., greater depth to groundwater or an impermeable layer than would be required under the proposed regulations) could propose relaxation of such a standard following implementation of the proposed statewide regulations. It is important to note that CEQA applies to discretionary projects proposed to be carried out or approved by a public agency (Public Resources Code Section 21080[a])[5]. Any local governing body proposing to amend a sewage disposal ordinance or other type of plan that was adopted to ensure the protection of water quality and public health would be required to address the potential significant effects of that action, in accordance with the requirements of CEQA.

Other comments provided during the public scoping period suggested that the proposed statewide regulations would increase development pressures in areas where soil conditions may be particularly well suited for installation of OWTS (e.g., high-quality agricultural lands). Similarly, potential future development proposals by local jurisdictions to annex land (e.g., rural agricultural and open space lands) to increase developable areas within local communities would be considered discretionary actions subject to environmental review under CEQA. Such proposals would be subject to review by neighboring jurisdictions and possibly to approval of the applicable Local Agency Formation Commission. Potential suitability of soils for installation of OWTS would not drive decisions by local governing bodies to pursue annexation of lands at the fringe of developed areas. Rather, local governing bodies would be required to weigh far-reaching variables related to growth and development. Key variables include regional economic trends, market demand for residential and nonresidential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions.

Section 21084 of the Public Resources Code requires the State CEQA Guidelines to include a list of classes of projects that have been determined not to have a significant effect on the environment and that would be exempt from the provisions of CEQA. In response to that mandate, the Secretary of Resources established classes of projects that are considered categorically exempt from the requirement to prepare environmental documents (State CEQA Guidelines Section 15300). Class 8 consists of actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. It is important to note that,

[5] A project is discretionary if the public agency is required to exercise judgment in deciding whether to approve or disapprove the particular activity as distinguished from situations where the public agency merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations (Public Resources Code Section 21080 and State CEQA Guidelines Section 15357).

"[C]onstruction activities and relaxation of standards allowing environmental degradation are not included in this exemption." (State CEQA Guidelines Section 15308)[6] In instances where a local governing body has adopted a sewage disposal ordinance with a restriction on installation of OWTS that is more protective of the environment, CEQA does not provide a mechanism that would allow the governing body to amend its ordinance in a way that would result in a relaxation of environmental protection standards without an evaluation of the environmental impacts associated with the discretionary action.

As described above under "Protection of Water Quality in California," the State Water Board sets statewide policy for the implementation of state and federal laws and regulations that address protection of water quality, including the Porter-Cologne Act (Water Code Section 13000 et seq.). Section 13002 addresses the power of a city or county to adopt and enforce additional regulations limiting the disposal of waste or any other activities that could degrade waters of the State. Consistent with this mandate, local jurisdictions often exercise their authority to adopt specific guidelines and standards to achieve water quality objectives locally, while acknowledging the requirement to comply with the minimum standards contained in the respective Basin Plans (discussed above under the section, "Local Regulatory Guidance Processes For Siting and Management of OWTS").

The case studies in this analysis provide a basis for understanding the level of responsibility that county and city departments (e.g., county departments of environmental health) assume for protection of water quality and public health. Each of the local municipalities discussed in this section have an adopted sewage disposal ordinance as part of its municipal code. In Santa Cruz and Sonoma Counties, high population density, unique geophysical conditions, and historical problems with OWTS-related groundwater and surface water contamination have led to development of detailed code requirements by those two municipalities. High population density in the western half of Riverside County and the historical rate of installation and replacement of OWTS (4,000–6,000 annually over approximately 10 years) present challenges for protection of surface and groundwater quality in that county. Riverside County recently amended its Ordinance No. 650.5 to ensure compliance with the draft statewide regulations for management of OWTS. The Town of Paradise in Northern California is relatively small with a population of less than 30,000 people; however, the community is unsewered, and the Town has adopted local regulatory guidance for permitting, installation, and repair of OWTS through formation of its on-site wastewater disposal zone and adoption of Chapter 13.04 of the Town's municipal code. Most of the development in Inyo County is located in small communities located near Highway 395. Although some areas are sewered, others rely on septic systems that also use individual or community water wells for potable water. Through an MOU with the Lahontan Regional Water Board, the Inyo County Department of Environmental Health is authorized to oversee management of OWTS in the county. Inyo County's sewage disposal ordinance is brief and nonspecific, and the county relies primarily on guidance and standards contained in the Basin Plan for the Lahontan Regional Water Board (1995), EPA's On-site Wastewater Treatment Systems Manual (EPA 2002), and the Uniform Plumbing Code. The Inyo County General Plan addresses allowable density of development on parcels with individual sewage disposal systems (Table 4.3-1).

Table 4.3-2 compares selected criteria of the proposed statewide regulations with local regulations for Santa Cruz County, Riverside County, Sonoma County, Inyo County, and the Town of Paradise. Under the first section, "Minimum Operating Requirements," elements of the proposed regulations were selected based on their potential to affect siting of OWTS on a parcel of land. For the five municipalities examined in this section, a comparison of selected criteria leads to the following general conclusions:

- **Depth to groundwater or an impermeable layer.** For the most part, regulatory guidelines for the local agencies are at least as protective of the environment as the proposed statewide regulations would be. Potential conflicts include the following:

[6] *International Longshoremen's and Warehousemen's Union v. Board of Supervisors*, (1981) 116 Cal.App.3d 265. This decision ruled that the use of categorical exemption Class 8 was improper for a change in a county air pollution rule that allowed a doubling of the emissions of oxides of nitrogen.

Table 4.3-2
Comparison of Selected Elements of the Proposed Statewide Regulations with Local Regulations of Selected Local Municipalities

Selected Elements from the Proposed Regulations	Proposed Project[7]	Santa Cruz County	Riverside County	Sonoma County	Inyo County	Town of Paradise
Minimum Operating Requirements						
Dispersal system standards and requirements for new OWTS	• 3-foot minimum depth to groundwater or impermeable layer for conventional OWTS; 2-foot minimum for OWTS with supplemental treatment components. • For either conventional OWTS or OWTS with supplemental treatment components, limits for rocky soils: pressure distribution system required; minimum soil depth increases. • Where undisturbed earthen material (native soil) has insufficient depth to satisfy the minimum depth requirement, engineered fill may be added based on specifications: 1.5 feet of engineered fill replaces 1 foot of native soil; pressure distribution system required; no more than 1 foot of native soil may be replaced with engineered fill. • Seepage pits limited to sites unsuitable for other dispersal systems. 10-foot minimum depth to groundwater or impermeable layer below the pit bottom for conventional OWTS. Separation to groundwater reduced if supplemental treatment used. • 0.7 reduction factor allowed in length of leachfield for gravel-less chambers.	• Standard systems: If minimum horizontal distance to a well, stream, spring, or other waterbody is 101–250 feet, 5–50 feet of continuous unsaturated soil to seasonal high groundwater is required depending on the percolation rate. If minimum horizontal distance to a well, stream, spring, or other waterbody is greater than 250 feet, 5–8 feet of continuous unsaturated soil to seasonal high groundwater is required depending on the percolation rate. • Enhanced treatment systems: If minimum horizontal distance to a well, stream, spring, or other waterbody is 25–50 feet, 5 feet of continuous unsaturated soil to seasonal high groundwater is required. If minimum horizontal distance to a well, stream, spring, or other waterbody is 51–100 feet, 3 feet of continuous unsaturated soil to seasonal high groundwater is required. If minimum horizontal distance to a well, stream, spring, or other waterbody is 101–250 feet or greater, 1 foot of continuous unsaturated soil to seasonal high groundwater is required. • For new OWTS, 10-foot minimum separation to an impermeable layer. • Trenches must be placed in areas where the soil has not been removed, altered, or filled. • Leaching systems are prohibited in areas containing fill. • Seepage pits sometimes allowed with system repairs or to expand an existing system. Minimum 10-foot separation to groundwater below the bottom of the pit.	• For conventional dispersal systems, at least 5 feet of continuous unsaturated soil to groundwater and 8 feet to an impermeable layer. • For mound systems, minimum depth to seasonal groundwater from the ground surface is 2 feet. Minimum depth of 3 feet is specified from the ground surface to an impermeable layer. Minimum depth may be increased depending on soil conditions. Site slope for mound systems may not exceed 12%. • No OWTS shall be allowed in areas where the high water table is less than 10 feet below the existing ground surface except in some areas in the Coachella Valley. • Where soils consist of greater than 10% rock fragments, the dispersal system area shall be increased in proportion to the percentage of rock fragments to compensate for the lost treatment volume. • Placement of systems only in undisturbed native soil. • For seepage pits, 10 feet of continuous unsaturated soil to groundwater and 8 feet to an impermeable layer.	For standard treatment systems: • For slopes up to 20% minimum soil depth below the bottom of the trench to an impermeable layer or groundwater is 3 feet. • Standard systems not allowed on slopes greater than 20%. For non-standard treatment systems (i.e., experimental and alternative): • With acceptable pretreatment (e.g., a sand filter), minimum elevated groundwater level is 2 feet from native grade. Other systems require a minimum of either 2 or 3 feet of suitable soil beneath the trench bottom to groundwater, fractured rock, or impermeable soils. • Rock content may not exceed 50% by volume within the first 2 feet of soil below native grade or below the bottom of the trench. • Non-standard systems prohibited in areas that have been filled, excavated, ripped or plowed, altered, or otherwise modified. • Natural ground slope may not exceed 30%. For filled-land systems: • Minimum depth of 2 feet of pervious native soil below leaching trench plus sufficient pervious fill material over the trench to achieve a total depth of 3 feet. • Absorptive quality of the imported soil must be equal to or better than the native soil. Sand, gravel, or rock do not qualify as acceptable material for filled-land areas. • Natural ground slope not to exceed 20%. General requirement: • Under certain conditions, repair of an existing system may allow for creation of a seepage pit. It must be filled with drain rock and be no more than 6 feet deep.	• Where percolation rates are faster than 5 mpi, the total thickness of soil beneath the leaching trench may vary in depth from 5–40 feet, depending on the percolation rate and the size and quantity of rocks in the soil. The percolation rates are determined in accordance with procedures prescribed by the appropriate local public health agency (e.g., the Inyo County Environmental Health Services Department). Testing determines suitability of site for conventional or non-standard system. • Clay, bedrock, other impervious material, or fractured bedrock may not be less than 5 feet below the bottom of the leaching trench or less than 10 feet below the bottom of the seepage pit. • Depth to high groundwater may not be less than 5 feet below the bottom of the leaching trench, nor may it be less than 10 feet below the bottom of the seepage pit. Greater depths required if the native material does not provide adequate filtration.	• For standard and pretreatment systems, the permanent and temporary water tables may not be less that 4 feet and 2 feet, respectively, from the bottom of the absorption trench. Maximum depth of trenches below the natural soil surface is 4 feet. For standard and pretreatment systems, ground slope may not exceed 30% and 45%, respectively. • Steep slope systems (a type of alternative system) may be allowed on slopes up to 45%. Minimum soil depth of 6 feet with no evidence of saturation to a depth of 8 feet. • Engineered fill thicker than 12 inches is generally used to provide the minimum required effective soil depth in areas of high groundwater or over a restrictive layer. Fill is subject to examination and approval by the On-site Sanitary Official. Texture of the fill must be the same as the native soil or one textural class coarser. First 6 inches of the engineered fill must be mixed with the native soil. • If rock content exceeds 50%, engineered fill, pressure distribution, and pretreatment may be required. • Seepage pits are not allowed.

[7] Includes selected criteria from the proposed regulations that could affect siting of OWTS.

Table 4.3-2
Comparison of Selected Elements of the Proposed Statewide Regulations with Local Regulations of Selected Local Municipalities

Selected Elements from the Proposed Regulations	Proposed Project[8]	Santa Cruz County	Riverside County	Sonoma County	Inyo County	Town of Paradise
Local Implementation						
Requirements providing direction on how OWTS regulations could be entirely or partially implemented by counties, cities, and special districts	• Must notify regional water board for work on OWTS larger than 3,500 gpd or if wastewater source changes (e.g., domestic to commercial). • Implemented by State Water Board or regional water board through conditional waivers of WDRs. • MOU or agreement between local agency and regional water board not required but, if used; must adhere to these regulations and applicable Basin Plan. • Local agency or regional water board retains option for setting more protective requirements for water quality.	MOU between Santa Cruz County and Central Coast Regional Water Board allows County to permit and regulate OWTS. For OWTS covered under the San Lorenzo River Watershed Management Plan, County allowed to permit and regulate OWTS up to 20,000 gpd.	• OWTS regulation shared between the county and the applicable regional water boards (Santa Ana, San Diego, and Colorado River Basin), with County as lead agency for single family residences, including new subdivisions and small commercial developments. • MOU between Riverside County and the Santa Ana Regional Water Board allows the County to permit and oversee OWTS that discharge domestic wastes up to 5,000 gpd. No formal agreements between the County and either the San Diego or the Colorado River Basin Regional Water Boards. • Regional water boards may review and approve or deny subdivisions. Regional water boards maintain jurisdiction over multifamily and large flow discharges. • San Diego Regional Water Board generally relies on the Riverside County Department of Environmental Health on decisions related to oversight and regulation of septic systems to serve residential uses, including alternative systems. • Specific issues and questions on OWTS management may be referred directly to the applicable regional water board for resolution.	MOUs and Joint Innovative Waste Treatment and Disposal System Evaluation Agreements in effect with the North Coast and San Francisco Regional Water Boards.	MOU between Inyo County and Lahontan Regional Water Board allows County to permit and regulate OWTS.	In 1992, the Town formed an "on-site wastewater disposal zone," in accordance with provisions of the California Health and Safety Code (Section 6950 et seq.) (Danz, pers. comm., 2007). With approval of the Central Valley Regional Water Board, the on-site wastewater disposal zone has the authority to: • Collect, treat, reclaim, or dispose of wastewater without use of a communitywide sewer system provided that water quality degradation does not occur inside or outside of the zone. • Acquire, design, own, construct, install, operate, monitor, inspect, and maintain OWTS within the zone in a way that prevents the pollution, waste, and contamination of water, and to abate nuisances. • Conduct investigations and analyses and monitor conditions regarding water quality within the zone. • Adopt and enforce reasonable rules and regulations necessary to implement the purposes of the zone.

Notes: This table summarizes certain regulatory guidance and is not intended to present complete and comprehensive discussions of applicable regulations for these selected municipalities. Information on the proposed statewide regulations that is included in this table has been selected based on its particular applicability to land use and planning issues. The complete text of the proposed regulations is contained in Appendix B of this EIR.
gpd = gallons per day
MOU = memorandum of understanding
WDRs = waste discharge requirements
mpi = minutes per inch
Sources: Santa Cruz County: Santa Cruz County 2004; Santa Cruz County 2001; Section 7.38 of the County Code, Chapter 7.38, "Sewage Disposal," is available online at http://ordlink.com/codes/santacruzco/index.htm.
Riverside County: Haraksin, pers. comm., 2007; Martinez, pers. comm., 2007; Riverside County 1981; State Water Board 1980; Ordinance 650.5 is available online at http://www.clerkoftheboard.co.riverside.ca.us/ords.htm.
Sonoma County: Sonoma County PRMD "policies and procedures" numbered 9-2-5, 9-2-8, 9-2-13, and 9-2-17, which are available online at http://www.sonoma-county.org/prmd/docs/policies/index.htm.
Inyo County: Lahontan Regional Water Board 1995; EPA 2002; and the Uniform Plumbing Code; Moskowitz, pers. comm., 2006
Town of Paradise: Town of Paradise 1992; Danz, pers. comm., 2007; Chapter 13.04, "Sewage Disposal," is available online at http://www.townofparadise.com/code_enforcement.html.

[8] Includes selected criteria from the proposed regulations that could affect siting of OWTS.

- For enhanced treatment systems, Santa Cruz County may allow 1 foot of continuous unsaturated soil to seasonal high groundwater if the minimum horizontal distance to a well, stream, spring, or other waterbody is 51–250 feet or greater. For this particular siting requirement, implementation of the proposed regulations would require the County to increase the minimum depth to 2 feet. The Santa Cruz County regulatory requirements for installation of OWTS are relatively complex and detailed, and while implementation of the new depth requirement may result in a regulatory conflict in some instances, it would not conflict with Santa Cruz County land use regulations that have been adopted to avoid and mitigate potential effects to the environment; rather, the regulations would, if anything, be more protective of the environment.

- For standard and pretreatment systems, the Town of Paradise specifies a minimum depth of 2 feet to the temporary water table. In practice, a 2-foot separation is considered inadequate; moreover, approval of any proposal for installation of an OWTS with 2.0–3.75 feet of separation to groundwater would be granted conditionally (Danz, pers. comm., 2007). The proposed regulations would require a minimum depth of 3 feet to groundwater or an impermeable layer. Based on the site evaluation processes and practices followed by the Town's On-site Sanitary Official, the 3-foot depth requirement would not result in a notable regulatory conflict or a significant impact to the environment.

- For mound systems, both Riverside and Sonoma Counties allow a minimum depth of 2 feet to groundwater from the original (or native) ground surface. Under the proposed statewide regulations, a mound system is considered a type of conventional OWTS, which requires a minimum depth of 3 feet to groundwater or an impermeable layer. Depending on the height of the mound, it is possible that the 3-foot minimum depth requirement could be satisfied. Implementation of this 3-foot depth requirement would not result in a conflict with local land use regulations that have been adopted to avoid and mitigate potential effects to the environment.

- **Limits for rocky soils.** The proposed regulations specify that for either conventional OWTS or OWTS with supplemental treatment components, "…at least three feet of continuous unsaturated, undisturbed, earthen material with less than 30 percent of that material by weight containing mineral particles in excess of 0.08 inches (2 millimeters) in size (i.e., rock) below the bottom of the dispersal system…" If this requirement cannot be met, either one of two requirements must be met: (1) minimum required undisturbed soil depth would increase, or (2) application rate would be reduced. (Refer to Section 30014[c] and [d] of the proposed regulations in Appendix B of this EIR.) Both Sonoma County and the Town of Paradise have special requirements if rock content exceeds 50%. Although a conflict could occur with regard to allowable rock content for a particular parcel of land, the proposed regulations also allow for a reduction in application rate to compensate for rock content that exceeds 30%. Therefore, the criterion that would set limits for rocky soils in the proposed regulations would not result in a notable conflict with adopted regulations of local municipalities that address rocky soils. Nor would it result in a significant impact to the environment.

- **Use of engineered fill.** The Santa Cruz County sewage disposal ordinance does not allow placement of trenches in areas where the soil has been removed, altered, or filled. Leaching systems cannot be placed in areas containing fill. Riverside County allows placement of systems only in undisturbed native soil (Haraksin, pers. comm., 2007). For Santa Cruz and Riverside Counties, the allowance for use of engineered fill in the proposed statewide regulations could be advantageous to landowners interested in installing on-site treatment systems on particular parcels of land; however, these and other local municipalities rely on additional testing procedures and siting criteria to assess site suitability (e.g., soil texture, percolation rates, minimum horizontal distances to surface water bodies, ground slope, and minimum lot size requirements). The Town of Paradise addresses use of engineered fill in its *Manual for the On-site Treatment of Wastewater* (Town of Paradise 1992); use of engineered fill to meet the minimum effective soil depth requirement is allowed with no stated depth limit on the amount of fill that is used. Town staff rarely receives requests from engineers to use fill for installation of an on-site treatment system. During the past year, engineering plans for one on-site system

were approved by the Town that involved placement of engineered fill to compose half of the sand filter bed for an above-ground system (Danz, pers. comm., 2007).

Because many environmental factors are considered during site testing, the allowance for engineered fill in the proposed regulations would not result in a notable conflict with the adopted regulations of local municipalities that do not currently allow use of engineered fill. Nor would it conflict with Town of Paradise regulatory requirements allowing the use of engineered fill to an unspecified depth. In practice, the Town does not receive many engineering plans for on-site treatment systems that propose use of engineered fill. The allowance for use of engineered fill would not conflict with local land use regulations that have been adopted to avoid and mitigate potential effects to the environment.

- **Use of seepage pits.** The Town of Paradise does not allow the use of seepage pits. As discussed above, Section 13002 of the Water Code describes the authority retained by local governing bodies to adopt and enforce additional regulations limiting the disposal of waste or any other activities that could degrade waters of the State. The proposed regulations include a provision that is consistent with this section of the State Water Code: "Regional Water Boards and local agencies implementing the OWTS regulations retain the option of establishing requirements for OWTS that are more protective of water quality than the requirements contained in this Chapter." (Section 30001[a] of the proposed regulations) Therefore, in instances where local municipalities do not currently allow the use of seepage pits, no regulatory conflict would occur.

- **Reduction factor allowed.** The proposed regulations address the use of gravel-less chambers to meet the requirements for dispersal systems (Section 30014[g] of the proposed regulations). (Refer to Chapter 2.0 in this EIR for a description of gravel-less chambers.) Based on scientific studies, the performance of an on-site system with a gravel-less chamber justifies implementation of a 0.7 reduction factor in the size of the leachfield. In practice, the reduction factor could allow the total length of a leachfield to be reduced to 70% of the length of the leachfield that might have otherwise been required, which may or may not affect the ability of a landowner to install a septic system on a smaller lot than would have otherwise been allowed. For example, for a local jurisdiction that has enacted a one-half acre minimum lot size requirement, it is possible that the 0.7 reduction factor could influence whether or not an on-site disposal system could be installed on a particular lot. However, the proposed regulations would not dictate whether or not a city of county could approve development of a parcel of land. In other words, the proposed statewide regulations would not cause development to occur in places other than where it is allowed by the local governing body. Also, local regulating agencies consider various environmental factors to assess suitability of a site for a septic system. Site evaluation procedures of local governing bodies would still be in effect. The 0.7 reduction factor in the proposed regulations would not result in a notable conflict with adopted regulations of local municipalities that limit siting of OWTS to avoid or minimize potential significant effects to the environment.

Table 4.3-2 also addresses the shared authority for oversight and implementation of OWTS regulations and guidelines (under the second section, "Local Implementation"). As described above under, "Waste Discharge Requirements and Waivers," the authority for oversight and regulation of septic systems typically is conditionally waived to the local governing body (e.g., the County Environmental Health Services Departments) under an MOU with the regional water board. With MOUs, the local agency is ultimately responsible for ensuring compliance with the applicable Basin Plan. The purpose of the proposed statewide regulations is to establish minimum requirements for the permitting, monitoring, and operation of OWTS to prevent conditions of pollution and nuisance. Consistent with the existing regulatory process, the proposed regulations could be entirely or partially implemented by a local agency through agreement, adopted resolution, or MOU (Section 30001[g] of the proposed regulations). Implementation of the proposed regulations would be accomplished through conditional waivers of WDRs by the State Water Board or the regional water boards (Section 30001[e] of the proposed regulations). Implementation of the proposed statewide regulations would neither change nor dismantle the regulatory framework related to the permitting, siting, and management of OWTS that is shared between the regional water boards and local governing bodies in the State.

The proposed regulations would require notification of the applicable regional water board for work to be performed on any OWTS with capacity to treat over 3,500 gpd (Table 4.3-2 under "Local Implementation"). The Santa Cruz County Environmental Health Services Department retains authority for regulation of septic systems in the County under an MOU with the Central Coast Regional Water Board. Santa Cruz County addresses management of septic systems in the San Lorenzo River Watershed through implementation and enforcement of requirements contained in its *Wastewater Management Plan for the San Lorenzo River Watershed* (Santa Cruz County 1995a). The Central Coast Regional Water Board usually issues WDRs to owners of OTWS with the capacity to treat over 2,500 gpd (Marks, pers. comm., 2007). Ongoing work by the County to improve water quality within the San Lorenzo River watershed through implementation of the wastewater management plan provides the basis for local management of OWTS within the watershed, including those on-site treatment systems that are permitted to treat up to 20,000 gpd of wastewater (Marks, pers. comm., 2007). Implementation of the proposed statewide regulations would not prevent the Santa Cruz County Environmental Health Services Department from exercising its regulatory authority over OWTS in the San Lorenzo River watershed, provided that the County continued to meet or exceed the minimum requirements of Central Coast Regional Water Board, including those that are more protective of the environment than the proposed statewide regulations.

Table 4.3-2 compares selected elements of the proposed statewide regulations with local regulations for the five selected local municipalities. Under the first section, "Minimum Operating Requirements," elements of the proposed regulations were selected based on their potential to affect siting of OWTS on a parcel of land. The second section, "Local Implementation," addresses the shared authority for oversight and implementation of the proposed regulations. Similarly, Table 4.3-3 compares selected criteria of the proposed statewide regulations with the criteria for individual waste disposal systems contained in the Basin Plans for the Lahontan and Santa Ana Regional Water Boards. A comparison of selected criteria leads to the following general conclusions:

- **Depth to groundwater or an impermeable layer.** For depth limits, siting criteria of the Lahontan and Santa Ana Regional Water Boards are more protective of the environment than the proposed statewide regulations would be. The proposed regulations state that regional water boards and local agencies implementing the OWTS regulations retain the option of establishing requirements for OWTS that are more protective of water quality (Section 30001[a] of the proposed regulations). Therefore, in instances where regional water boards require greater depths to groundwater or an impermeable layer below the leaching trench or disposal facility, no regulatory conflict would occur that could result in a significant impact to the environment.

- **Limits for rocky soils.** The Basin Plans and related documents that address siting criteria for sewage disposal systems for the Lahontan and Santa Ana Regional Water Boards do not specify limits for rock content in soil beneath the leaching trench. As discussed previously, local agencies retain the authority to adopt and enforce regulations and guidelines to achieve water quality objectives provided that minimum standards contained in the application Basin Plans are met. It is possible that the sewage disposal ordinances and other regulatory guidelines of the local agencies do not specifically address limits for rocky soils. Because many environmental factors are considered during site testing, the limits for rocky soils in the proposed regulations would not result in a notable conflict with the adopted regulations of local municipalities.

  Use of engineered fill. The Basin Plans and related documents that address siting criteria for sewage disposal systems for the Lahontan and Santa Ana Regional Water Boards do not address use of engineered fill. It is possible that the sewage disposal ordinances and other regulatory guidelines of local agencies with authority to regulate siting of OWTS within these areas do not specifically address use of engineered fill to satisfy minimum soil depth requirements. For landowners living in cities and counties within the boundaries of the Lahontan and Santa Ana Regional Water Boards, the allowance for use of engineered fill in the proposed statewide regulations could increase opportunities to install OWTS on land parcels; however, local municipalities rely on other testing procedures and siting criteria to assess site suitability (e.g., soil texture, percolation rates, minimum horizontal distances to surface water bodies, ground slope, and minimum lot size requirements). Because many environmental factors are considered during site testing, the allowance for

Table 4.3-3
Comparison of Selected Elements of the Proposed Statewide Regulations with Applicable Criteria from the Basin Plans of Selected Regional Water Boards

Selected Elements from the Proposed Regulations	Proposed Project	Lahontan Regional Water Board (Region 6)	Santa Ana Regional Water Board (Region 8)
Minimum Operating Requirements			
Dispersal system standards and requirements	• 3-foot minimum depth to groundwater or impermeable layer for conventional OWTS; 2-foot minimum for OWTS with supplemental treatment components. • Limits for rocky soils: pressure distribution system required; minimum soil depth increases. • Where undisturbed earthen material (native soil) has insufficient depth to satisfy the minimum depth requirement, engineered fill may be added based on specifications: 1.5 feet of engineered fill replaces 1 foot of native soil; pressure distribution system required; no more than 1 foot of native soil may be replaced with engineered fill. • Seepage pits limited to sites unsuitable for other dispersal systems. 10-foot minimum depth to groundwater or impermeable layer below the pit bottom for conventional OWTS. Separation to groundwater reduced if supplemental treatment used. • 0.7 reduction factor allowed in length of leachfield for gravel-less chambers.	• Where percolation rates are faster than 5 mpi, the total thickness of soil beneath the leaching trench may vary in depth from 5–40 feet, depending on the percolation rate and the size and quantity of rocks in the soil. The percolation rates are determined in accordance with procedures prescribed by the appropriate local public health agency. • Clay, bedrock, other impervious material, or fractured bedrock may not be less than 5 feet below the bottom of the leaching trench or less than 10 feet below the bottom of the seepage pit. • Depth to high groundwater may not be less than 5 feet below the bottom of the leaching trench, nor may it be less than 10 feet below the bottom of the seepage pit. Greater depths required if the native material does not provide adequate filtration. • Limiting conditions for conventional systems (e.g., soils, depth to groundwater, slope) may also apply to alternative systems that rely on soil absorption for treatment and/or disposal of all or most of the wastewater generated.	• Depth of soil between ground surface and anticipated high groundwater in the disposal area may not be less than 10 feet. • Depth of soil between the bottom of any leaching system and any impermeable layer may not be less than 8 feet. • Depth of soil containing at least 10% of the particles smaller than 0.08 inches (2 mm) between the bottom of the disposal facility and anticipated high groundwater may not be less than 5 feet. • Percolation rate in the disposal area may not be greater than 60 mpi if the discharge is to a leachfield, and not less than 1.1 gallons of effluent per square foot per day if the discharge is through a seepage pit. Where percolation rates are faster than 5 mpi, the total thickness of soil beneath the disposal facility may be increased to 40 feet, and additional testing may be required. The percolation rates are determined in accordance with procedures prescribed by the appropriate public agency.
Local Implementation			
Requirements providing direction on how OWTS regulations can be entirely or partially implemented by counties, cities, and special districts.	• Must notify regional water board for work on OWTS larger than 5,000 gpd or if wastewater source changes (e.g., domestic to commercial). • Implemented by State Water Board or regional water board through conditional waivers of WDRs. • MOU or agreement between local	Lahontan Regional Water Board has entered into MOUs with cities and counties for implementation of regionwide septic system criteria, including density limits. The MOUs cover discharge that is composed only of domestic wastes. Approval by the Lahontan Regional Water Board is required under the following	Santa Ana Regional Water Board has entered into MOUs with Riverside and San Bernardino Counties for implementation of regionwide septic system criteria. The MOUs cover discharge that is composed only of domestic wastes. Discharges from commercial developments may not

Table 4.3-3
Comparison of Selected Elements of the Proposed Statewide Regulations with Applicable Criteria from the Basin Plans of Selected Regional Water Boards

Selected Elements from the Proposed Regulations	Proposed Project	Lahontan Regional Water Board (Region 6)	Santa Ana Regional Water Board (Region 8)
	agency and regional water board not required but, if used; must adhere to these regulations and applicable Basin Plan. • Local agency or regional water board retains option for setting more protective requirements for water quality.	conditions: • Discharge of domestic wastewater from commercial or industrial development that exceeds 500 gallons per acre per day. • Discharge of wastewater with industrial constituents. • Discharge greater than 250 gallons gpd per EDU. • Discharge from projects that do not comply with the City's or County's OWTS standards. • Discharge from projects located within existing waste discharge prohibition areas. • Discharge from projects using package wastewater treatment plants with on-site wastewater disposal. • Discharge from single-family homes on lots created after June 16, 1988 when net lot area is less than 15,000 square feet.	exceed 5,000 gpd. The Santa Ana Regional Water Board reviews proposals for OWTS located within waste discharge prohibition areas.

Notes: This table summarizes certain regulatory guidance and is not intended to present complete and comprehensive discussions of criteria for individual waste disposal systems for these selected regional water boards. Information on the proposed statewide regulations that is included in this table has been selected based on its particular applicability to land use and planning issues. The complete text of the proposed regulations is contained in Appendix B of this EIR.
EDU = equivalent dwelling units (EDUs) are a unit of measure used for sizing a development based on the amount of waste generated from that development; as used in the Basin Plan, the value is 250 gallons per day (gpd) per EDU, and the discharge from a single-family dwelling is equal to one EDU.
WDRs = waste discharge requirements
gpd = gallons per day
MOU = memorandum of understanding
mm = millimeter
mpi = minutes per inch
Sources: Lahontan Regional Water Board 1995; Santa Ana Regional Water Board 1979; Santa Ana Regional Water Board 1995; Beeson, pers. comm., 2007; Koutsky, pers. comm., 2007

engineered fill in the proposed regulations would not result in a notable conflict with the adopted regulations of local municipalities that do not currently address use of engineered fill. Also, the allowance for engineered fill would increase the effectiveness of the infiltration process, therefore, the allowance for use of engineered fill would not conflict with local land use regulations that have been adopted to avoid and mitigate potential effects to the environment.

- **Use of seepage pits.** The Basin Plans and related documents that address siting criteria for sewage disposal systems for the Lahontan and Santa Ana Regional Water Boards address the use of seepage pits. The Santa Ana Regional Water Board's *Guidelines for Sewage Disposal from Land Developments* (Santa Ana Regional Water Board 1979) addresses minimum criteria for siting of OWTS. If discharge of effluent is through a seepage pit, the percolation rate may not be less than 1.1 gallons per square foot per day. No minimum depth to groundwater below the seepage pit is specified; however, depth to high groundwater from the ground surface in the disposal area may not be less than 10 feet. If the percolation rate is faster than 5 mpi, either additional testing will be required to determine compliance with particle size specifications (depth to high groundwater may not be less than 5 feet for soils containing at least 10% particles smaller than 0.08 inches [2 millimeters]) or the minimum required depth to groundwater below the disposal facilities will be 40 feet. The proposed statewide regulations require a 10-foot minimum depth to groundwater or an impermeable layer below the bottom of the seepage pit. This proposed minimum soil depth could be reduced with installation of an OWTS with supplemental treatment components that is designed to meet specified performance requirements. The proposed regulations would also allow the use of engineered fill where depth to groundwater is insufficient (1.5 feet of engineered fill could replace 1 foot of native soil). Implementation of the 10 foot soil depth requirement with a seepage pit would not result in a notable regulatory conflict. No regulatory conflict would occur that could result in a significant impact to the environment.

- **Reduction factor allowed.** Refer to the companion discussion under "Reduction factor allowed" for Table 4.3-2. As previously discussed, the 0.7 reduction factor in the proposed regulations would not result in a notable conflict with adopted regulations of the regional water boards or of local agencies that share authority to regulate siting limitations for OWTS.

Similar to Table 4.3-2, Table 4.3-3 addresses the shared authority for oversight and implementation of the proposed regulations (under "Local Implementation"). (Refer to the companion discussion above for Table 4.3-2.) Implementation of the proposed statewide regulations would neither dismantle nor change the regulatory framework related to the permitting, siting, and management of OWTS that is shared between the regional water boards and local governing bodies in the State.

The proposed statewide regulations for management of OWTS would not affect the authority or purpose of State planning law. Nor would it affect the land use planning processes of local governing bodies that are undertaken in accordance with State planning law. Any local governing body proposing to amend a sewage disposal ordinance or other type of plan that was adopted to ensure the protection of water quality and public health would be required to address the potential significant effects of that action, in accordance with the requirements of CEQA. Section 30001(a) of the proposed statewide regulations addresses how local agencies and regional water boards retain the option of adopting guidelines and standards for OWTS that are more protective of the environment and public health than the proposed regulations, which is consistent with the mandate established by Section 13002 of the State Water Code. Implementation of the proposed statewide regulations would neither dismantle nor change the regulatory framework related to the permitting, siting, and management of OWTS that is shared between the regional water boards and local governing bodies in the State.

This impact is considered less than significant. No mitigation is required.

IMPACT 4.3-2 *Conflicts Between Adopted Habitat Conservation Plans or Natural Community Conservation Plans and the Proposed Statewide Regulations for OWTS. Implementation of the proposed statewide regulations would not lead to preemption of guidelines, policies, or regulations that local planning agencies have in place to direct development in a way that avoids impacts to sensitive habitats and protected species, including HCPs or NCCPs. This impact is* ***less than significant.***

This land use analysis includes representative overviews of the local and regional planning environments for selected municipalities. As described above, Santa Cruz County and the City of Scotts Valley have been coordinating with USFWS to develop a draft Interim Programmatic Habitat Conservation Plan (IPHCP) that proposes an off-site mitigation program for landowners in the sandhills region of Santa Cruz County whose properties are zoned residential within existing residential areas on parcels smaller than 1 acre. An off-site mitigation site is being planned to protect selected species. USFWS is preparing an environmental assessment on the IPHCP, which is part of the 3- to 5-year project to develop a regional HCP.

The Riverside County Board of Supervisors adopted the Western Riverside County MSHCP in June 2003, which is focused on conservation of species and their associated habitats in western Riverside County. The MSHCP plan area encompasses approximately 1.26 million acres. It is one of several large, multi-jurisdictional habitat planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within an urban region. Large-scale HCP planning efforts have been completed in San Diego and Orange Counties and a similar effort is underway in the Coachella Valley in Riverside County. As previously described, the Western Riverside County MSHCP policies govern development standards with regard to the MSHCP plan area.

Similar habitat management planning and management efforts are being pursued in other parts of the state. The process to adopt and implement HCPs and NCCPs involve discretionary actions by local municipalities that require separate environmental review under CEQA and/or the National Environmental Policy Act (NEPA). All feasible mitigation for any significant environmental effects would be implemented with adoption of the HCP or NCCP.

As discussed previously in this section, California State law has established the general plan as the basic land use charter that embodies fundamental land use decisions and governs the direction of future land uses at the local level. (*City of Santa Ana v. City of Garden Grove* [1979] 100 Cal.App.3d 521, 532; *see also DeVita*, 9 Cal. 4th at 763.) Furthermore, any decision by a city or county that will affect land use and development must be consistent with the adopted general plan. Otherwise, an amendment to the general plan would be required, in accordance with Government Code Section 65350 et seq.

For example, the Riverside County Integrated Project (RCIP) includes the Western Riverside County MSHCP, and the Riverside County General Plan. The open space element of the General Plan includes Policy OS 17.1, which states, “Enforce the provisions of applicable MSHCP’s, if adopted, when conducting review of development applications.” The RCIP is a collection of policies, guidelines, and implementation measures, which have been adopted to achieve common goals related to development and growth within Riverside County. No aspect of the proposed statewide regulations would preempt the authority of local jurisdictions to guide the ultimate patterns of development for communities throughout the state, as shown by the examples provided for Santa Cruz County and Riverside County.

Furthermore, implementation of the proposed statewide regulations would affect siting of OWTS by requiring compliance with minimum standards, which include maintaining certain depths of continuous unsaturated soil and limits on allowable use of engineered fill to meet minimum depth requirements. No aspect of these or other proposed regulatory requirements of the proposed project would conflict with policies or guidelines contained in HCPs or NCCPs in the state, which have been adopted as tools to avoid environmental degradation of sensitive habitat areas that are critical to species survival.

This impact is considered less than significant. No mitigation is required.